REPORT

OF THE

BOMBAY FOREST COMMISSION.

VOLUME I.

PROCEDURE—REVIEW OF EVIDENCE—
RECOMMENDATIONS.

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CHAPTER I.

INTRODUCTION—APPOINTMENT AND PROCEDURE.

INTRODUCTION.

Appointment of the Commission.

1. The orders of Government appointing the Commission are contained in Government Resolution in the Revenue Department, No. 5977 of the 24th July 1885, which is here quoted in full :—

"The Governor in Council—wishing to secure an efficient management of forests and believing that the conservancy of forests and the maintenance of the rights of the Crown is beneficial to the interests of the people in providing for a continuous supply of timber; wishing to secure the agricultural wants of the people and the privileges they have hitherto enjoyed for the legitimate fulfilment of these wants; convinced that where friction has arisen in the management of forests, especially in Thána, such friction is due to a misunderstanding which can be removed; desirous to give to all parties concerned the means of bringing their views before Government—institutes a Commission of which the Acting Collector of Thána will be Chairman, and Members—

Ráo Bahádur Dáji Govind Gupte,
Ráo Bahádur Krishnáji Lakshman Nulkar,
Edward Charles Ozanne, Esq., C. S., M.R.A.C.,
Lieut.-Colonel William Peyton, M.C.S.,
Robert Charles Wroughton, Esq.,
Ráo Bahádur Yeshvant Moreshvar Kelkár.*

*(Member and Secretary).

2. The Commission will be placed in possession, before they begin their inquiries, of a clear statement[1] of the present regulations concerning forest administration showing what are the rights of Government and the privileges enjoyed by forest and non-forest villagers and the wild tribes.

3. The labour of the Commission will be mainly directed—

a.—to hearing complaints and ascertaining their reality;

b.—to the consideration of the best manner in which provision can be made for supplying the wants of the resident agriculturists as distinct from trade demands;

c.—to the situation of the wild tribes whether insufficient alternative provision has been made in any case of transfer of cultivation out of forests and insufficient employment has been found for them to enlist their sympathy;

d.—to the suggestion of means whereby the regulations of Government may best be made intelligible to the people and a hearty co-operation secured in their enforcement.

4. To illustrate further the object of Government in appointing the Commission some questions are brought under their notice on which the Government would desire to have the benefit of their opinion. Where scientific experiments are needed—as in the case of *ráb*—the Commission will take counsel with experts who—like the Principal of the College of Science at Poona—are able to give valuable evidence on the subject.

5. The Commission will not lose sight of the fact that forest settlements are in progress and the respective areas of Reserved and Protected forests not yet settled and the effect of working plans on the supply of forest produce still unknown.

RÁB.

For what food crops, if any, other than rice, is *ráb* needed by the cultivator?

2. If so, what proportion of land is ordinarily required for the collection of materials for "ráb" per acre of such crops?

3. Are there any, and if so, what trees, whose boughs and foliage are paculiarly valued as "ráb" material? And are they of descriptions of timber trees which it is essential to reserve, or which in the Thána district attain a size which make them valuable as timber in the commercial sense of the word?

4. Is it possible for the Forest Department to supply villages in the vicinity of forests, which have heretofore obtained their "ráb" materials from the forests, with such materials, at a cost (even cost price) within the cultivators' means, and at the times when, and in or sufficiently near the places where, they need "ráb"?

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[1] The statement here alluded to entitled "a Précis of correspondence and orders relating to forest administration in Thána" is reprinted in Vol. IV., pages 1 to 21.

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5. If the reply to the above question be in the negative, should the cultivator be permitted to enter the forests, Reserved or Protected, to collect "ráb" materials? If so, under what restrictions in either case?

6. Is there any present substitute for "táhál" (boughs, bushes and foliage) as "ráb" material? Could any be hereafter grown, supplied or maintained?

VILLAGERS IN VILLAGES IN THE VICINITY OF FORESTS.

Their domestic, agricultural and household wants.

Have the villagers sufficient facilities in obtaining wood for fuel, for building, for agricultural implements and the like, at a reasonably low price? If not, how and to what extent should they be supplied?

2. Might not the system of small fellings in numerous convenient spots be introduced by the Forest Department, from which the villagers could draw their supplies and small local industries obtain what fuel they need?

3. Is the grazing area in villages in the vicinity of forests sufficient and ought any and what further grazing privileges to be accorded in Government forests and with what restrictions?

4. What measures would yet further secure the hearty co-operation of the resident agricultural population in forest conservancy? And might it not be declared that the abuse of privileges may lead to a withdrawal of them from offending villages, for a term, or for ever?

Wild Tribes.

1. Are the wild tribes sufficiently paid for forest produce collected by them?

2. Are they as much employed as they might be by the Forest Department?

3. In short, is every effort made to enlist their sympathies and identify their interests, with those of the Forest Department?

THE TRADE.

Ought the system of passes for fire-wood and bamboos to be maintained after settlement?

2. Ought the depôt system to be abandoned, or might it not, with advantage, be extended for the supply of trade?

3. Ought export and sale of forest produce otherwise than from depôts to be prohibited and if not, what measures ought to be taken to prevent traders utilizing privileges given to agricultural residents and the wild tribes?"

Personnel of the Commission.

2. The only change in the *personnel* of the Commission which has occurred, since its original appointment, has been the nomination of Ráo Sáheb Rámchandra Trimbak Achárya, District Government Pleader, Thána, to fill the vacancy caused by the resignation of Ráo Bahádur Dáji Govind Gupte before the opening of the Commission.

Vide Government Resolution No. 6911, dated 26th August 1885, Revenue Department.

3. Ráo Bahádur Yashvant Moreshvar Kelkar, Member and Secretary of the Commission, who was at the time of his appointment holding the office of Assistant to the Commissioner, S. D., was relieved of his ordinary duties on the 15th October 1885. Similarly Mr. G. W. Vidal, who as Acting Collector of Thána was also *ex-officio* Chairman of the Commission, as originally constituted, was placed on special duty as President of the Commission from the 8th December 1885. From the above dates up to the 15th January 1887 the services of these two officers were exclusively at the disposal of the Commission.

4. The other official members of the Commission, *viz.*, Colonel W. Peyton and Messrs. Ozanne and Wroughton, have, throughout the period during which the Commission has been sitting, performed the work of their respective offices in addition to their duties as members.

Opening of the Commission.

5. The Commission was formally opened on the 27th of August 1885 in the Council Hall at Poona in the presence of His Excellency the Governor of Bombay and a large number of European and Native gentlemen interested in the proceedings. His Excellency addressed the meeting as follows:—

"Mr. Chairman and gentlemen:—I have asked permission to attend here to-day to thank you in the first place for the way in which you have placed your services at the disposal of the Government. You have a very delicate and difficult task to perform. You will, I am sure, acquit yourselves of the trust reposed in you with complete independence. The value of your labours will be enhanced if you lay down in your report the conclusions to which you may have been led by the inquiry, however varied they may be. It is perhaps not superfluous for me to add that the members of the Commission who represent the Civil Service are not acting in any way on the Commission as delegates or representatives of Government, but have been appointed to give their own views, the results of their own experience. You will on the other hand have to deal not with individual actions or the opinions of individual Government officers, but with the effect of Resolutions for which Government is all responsible. As long as the actions of a Government officer are sanctioned by the open or tacit approval of Government, Government is responsible. I need not here enter elaborately on the various causes which have led to the appointment of this Commission, but it is a remarkable fact that both the late and present Secretary of State have approved of the institution of this inquiry, and the sanction of His Excellency the Viceroy has also been obtained. The importance of the subject has been recognised, therefore, on all sides. Since I have had the honour of being charged with my present duties the matter has been a constant source of anxiety to me. Agricultural problems have always struck me as peculiarly interesting, and the more one looks into the various agricultural systems of various countries the more one becomes convinced that over-legislation in agricultural matters is a mistake, and that in the present condition of agricultural science, which is not by any means as far advanced as it ought to be, we must be careful to interfere as little as possible. Agricultural centralisation would certainly lead to disastrous consequences. To introduce into Lancashire the agricultural system of the lowlands of Scotland or the Ulster custom would betray rashness. Local wants, local customs, and local systems of village tenure have a right not to be wantonly disturbed unless a very good cause be shown for it. In many instances a scientific justification for local agricultural practices unconsciously observed by the population will be forthcoming. I approach agricultural questions with a strong bias in favour of the agriculturist, as every Scotsman would who has been accustomed in Scotland to give the most respectful consideration to the experience of shrewd farmers and shepherds and farm servants. In his speech on the Indian Budget the Secretary of State asked the question, how are you on the one hand to obtain the most desirable objects of preserving and renewing the forests, without on the other hand entailing hardships on the people by depriving them of valuable and long-established rights? That is the question which has constantly presented itself to me. I believe, however, that if forest conservancy tends to increase the supply of fodder and fuel for the people of this country the enterprise will meet with their support, and has a right to their sympathy. I also believe that the hardships can be mitigated, and that we have recently done a great deal to reduce them to a minimum. My chief object is to substitute co-operation for antagonism, confidence for distrust, contentment for disturbance. The worst result of centralisation is that measures which must inevitably benefit the people ultimately take a longer time for their acceptance than if they had been settled locally. In every forest settlement which I have dealt with, I have always carefully considered the peculiar circumstances of the locality, the existing resources for feeding of cattle and for the extension of cultivation, and the advantages which would accrue to the inhabitants from forest conservancy. And here, gentlemen, let me say that I believe that if your district boards had to deal with these questions they would not in their decisions come to conclusions differing very materially from those to which we have come. We are at great disadvantage because we have very often to decide at a distance intricate questions, and I for one have very keenly felt the responsibility of deciding between the conflicting opinions of local officers who perform their difficult duties with great care. One thing, however, is quite clear. If you wish to have improved fodder and more fuel, you must allow your plantations to grow; you must protect the young growth by closing such areas; you must close those areas in such a way that you cause a minimum of inconvenience to those who used to find on such areas pasture for their cattle. On the grazing question your report will no doubt throw light, but meanwhile you may take for granted that it is the determination of Government that wherever free grazing has been lawfully enjoyed it will be continued by giving a full equivalent in all those cases where the area hitherto used has been absorbed. I do not think that the people will have anything to complain of, as the equivalent will be an improvement on what formerly provided them with an insufficient supply. How, when, and where areas are to be closed; how, when, and in what numbers cattle are to be admitted to open areas, and on what conditions, seem to me to be essentially questions which must be settled on the spot by the combined action of the revenue officers and the forest officers, and on which Government can only lay down general principles. I may give an illustration from my own personal experience. By the last mail I instructed my agent, who had asked me whether I wanted pasture or timber, to settle the matter on the spot. Your Commission will fulfil the mandate contained in the Government Resolution of July 24, unhampered by any extraneous influence. A speedy, full, and local investigation of the forest conservancy of the district of Thána will, however, be most welcome to the Government, as it wishes to obtain your advice in detail on the situation of that district, which affords scope for the examination of nearly all the questions with which Government have to deal. You will, I doubt not, assist the Government in its endeavours to remove legitimate grievances. You will also assist Government in preventing wanton destruction of timber—a proceeding utterly

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unwarrantable, and most demoralising and injurious to the local national interests. A strong Government does not stand in need of exceptional measures to put a stop to such vandalism. This Commission will strengthen, not weaken, the ultimate actions of Government. It will uphold law and order; promote one of the chief elements of agriculture, namely, good pasture; promote harmony between the administration on the one side and the people on the other, whose interests will be ably represented on this Commission, not only by those whom they will perhaps more especially consider as their representatives, but also by officials whose desire I know, from personal experience, it is to preserve to the people privileges to which naturally they attach great value. You enjoy the confidence of Government, but your labours, gentlemen, will, I am sure, give you a further title to the gratitude of the people of the Presidency."

Preparation of questions on Forest Administration for circulation to selected witnesses.

6. On the 28th and 29th August 1885 further sittings were held at Poona. As a preliminary measure questions on general forest administration embracing all the points specially brought to the notice of the Commission in Government Resolution No. 5977 of the 24th July 1885 above quoted, and other matters which appeared to the members to deserve special consideration, were then drafted, discussed and approved. These questions, numbering forty seven in all, were arranged under the heads marginally noted and were circulated for the opinion of various officers in the Revenue, Forest and Survey Departments who were deemed specially qualified by previous experience to give useful advice. The invitation was responded to by in all forty-one officers. A summary of the answers thus received has been prepared by the Chairman and separately printed as one of the appendices to this report (Volume III.). The replies to the same questions submitted by the Thána Forest Association, and a note prepared by Mr. Ozanne at the request of the Commission with special reference to question 43, on the so-called industry of sugar-boiling carried on in the Bassein *táluka* of the Thána district, are printed as appendices to the same Summary.

I.—Management of lands in which communal privileges are enjoyed;
II.—Privileges to Residents of villages within whose limits no State Forests are included;
III.—Privileges to special classes;
IV.—Abuse of Privileges;
V.—Supply of Local Wants;
VI.—Measures to ensure the co-operation of the people in the protection of Forests;
VII.—Local Industries;
VIII.—Forest produce removed from occupied lands;
IX.—Trade.

7. As these questions were drawn up when the members had as yet only a general and vague idea of the complaints likely to be made, it was of course not to be expected that they should be exhaustive, or that the replies would obviate the necessity of taking further special evidence to clear up doubtful points raised by inquiries to be subsequently made, or to meet any specific allegations of illiberal treatment which the inhabitants of any district might bring forward. But the answers thus elicited form, as will be seen by a perusal of the Summary, a valuable addition to forest literature, and have materially aided the members of the Commission in their endeavours to arrive at sound conclusions on the numerous points at issue.

Preparation of questions on *ráb* cultivation.

8. At the same time in order to obtain all available information on the subject, Mr. Ozanne, at the request of the Commission, drew up a further set of questions on the practice, climatic and geographical limits, of the system of cultivation by *ráb* which consists in preparing the seed nursery by burning manure upon it. These questions were forwarded to several gentlemen who, it was believed, had special knowledge of the subject. *Ráb* cultivation in its relation to forest conservancy being one of the most important of the subjects on which the opinion of the Commission is desired, it is a matter of regret that the information thus obtained has been meagre.

9. On the other hand much useful light has been thrown on the subject by the experiments carried out during the past two seasons by the Director of Agriculture with a view to test the value and necessity of the system generally, and to determine the comparative worth of the different materials commonly used in the preparation of seed-beds for rice cultivation. Here and there, scattered through the evidence of cultivators examined by the Commission, will also be found useful information as to differences in the practice of *ráb* in different localities. Instead, therefore, of printing the questions circulated by

the Commission and the replies received, it has been thought desirable to substitute a note prepared by Mr. Ozanne (*vide* Appendix) which besides incorporating all available information sets forth the experimental results so far obtained.

Notices to complainants.

10. Notices were published in the Thána and Kolába local newspapers and in all the villages of those districts, intimating that the Commission was ready to entertain and inquire into all complaints regarding forest matters which might be preferred by a certain date, *viz.*, the 20th October 1885, and that the members would meet at Thána on the 2nd November 1885 to commence the necessary local inquiries into any complaints which might be received from that district.

Reasons for confining operations at first to the North Konkan districts.

11. It will be seen that the instructions to the Commission, above quoted, in no way precluded it from entertaining complaints against forest administration from districts other than those above specified. As, however, the alleged grievances of the inhabitants of Thána and portions of Kolába had been, for some time prior to the appointment of the Commission, brought very prominently to the notice of Government and the public generally, it was deemed desirable to confine the work of the Commission at first to those districts. This course was adopted in accordance with the wishes expressed by Government (Government Resolution No. 6982 of 28th August 1885). Any special grievances in connection with forest policy and administration which might be felt in other districts of the Bombay Presidency, would, it was believed, fall under one or other of the grounds of complaint which would be brought forward by the inhabitants of the North Konkan. It is hoped that the exhaustive inquiry into the past and present forest arrangements of the latter tract necessary to enable the Commission to recommend with confidence any permanent solution of the questions there at issue, will be of the greatest assistance in dealing with similar difficulties which have arisen, or may hereafter arise elsewhere, and that the general guiding principles which may be laid down as a result of the Thána inquiry, may, after making all due allowances for local circumstances, be applied in other districts where different interests clash, and thus remove the necessity for further local inquiries through the agency of a Commission.

Meeting at Thána to receive memorials.

12. As previously arranged the Commission met at Thána on the 2nd November 1885. By this date some 542 memorials had been received from the Thána and Kolába districts, besides 53 from other parts. To these were subsequently added 101 others (62 from Thána and Kolába, and the rest from elsewhere), making a total of 696, as shown in the margin.

Thána	436
Kolába	168
Poona	36
Ahmednagar	26
Khándesh	11
Sátára	4
Sholápur	4
Ratnágiri	4
Kánara	4
Násik	3
Total ...	696

13. The Thána memorialists having represented through their leaders on the 2nd November 1885 that they had not had sufficient time to prepare their case, it was decided, to suit the convenience of all parties, to re-assemble on the 10th December 1885 at Kolhár in the Karjat *táluka*, a convenient camp close to the Neral station on the G. I. P. Railway, and to hold as many sittings there as might be necessary to record the evidence of the witnesses residing within that *táluka*. This intention was duly notified to all concerned.

Statistical evidence.

14. Meanwhile advantage was taken of the presence of the members to decide what statistical evidence from the Thána and Kolába districts as to forests, cultivation, population, forest offences, forest establishment, export of forest produce, &c., would be required, and to adopt the necessary measures for its collection. The special information of this nature obtained from time to time for the use of the Commission has been compiled and printed in Volume IV. appended to the report.

Procedure adopted for inquiry into complaints.

15. As previously arranged the Commission met at Kolhár on the 10th December 1885, to commence the necessary local inquiry. The signatories of all the memorials from the Karjat *táluka* were then called upon to verify their

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written complaints and state what evidence they wished to produce in support of their claims. The memorials here as elsewhere disclosed many purely personal grievances as distinguished from complaints common, either to the entire local population, or to particular classes or villages. But the memorialists one and all agreed to put their case in the hands of the Thána Forest Association. No exact information as to the origin and constitution of this Association has been placed before the Commission. It is believed, however, that it includes within its ranks most of the leading landholders of the Thána District. The President of this body is Ráo Bahádur Náráyan Wásudeo Khárkar, who is also President of the Thána City Municipality, and branches of the Association have, we understand, been formed at the head-quarters of each *táluka* in the district.

The Thána Forest Association.

16. With two exceptions, which will be noted below, the same procedure with the same result as regards the trust imposed in this Association was subsequently followed in respect of all the other memorials received from the Thána District. This Association, at the request of the memorialists, also undertook to lay before the Commission the grievances of the people of the Panvel *táluka* of Kolába, which until recently formed part of the Thána Collectorate.

17. The only exceptions to this arrangement have been (1) the memorial of the lease-holders of Salsette and other alienees of the Thána District, who have complained of the working of the rules under Section 41 of the Forest Act as to timber in transit, and (2) a printed memorial signed by four inhabitants of Thána, of whom one is the Editor of a local vernacular newspaper, the Arunodaya, and the remaining three are Vakils practising in the District Court. The alienees' case has been separately laid before the Commission, while sitting at Poona, by their representative Mr. Kharsetji Hormasji Dádishet.

Vide Vol. IV, pages 22 to 24.

Vide Vol. IV, pages 25 to 50.

The other four joint memorialists above mentioned, although at first very clearly expressing their wish to bring evidence and be heard independently of the Thána Forest Association, have, despite ample opportunities for such independent action and hearing, failed to take any steps in furtherance of such intention. The history of this separate memorial has not been explained, and its necessity has at no time been apparent. The four co-signatories in making this separate complaint have, as they have informed the Commission, been actuated by the "stern demands of the duty they owe to themselves and the public at large." The claims, however, brought forward in their memorial and the arguments used to support them, differ in no material degree from the claims and arguments set forth in the memorial submitted in December 1884 to His Excellency the Viceroy and Governor General of India by the inhabitants of Thána, which has formed the text of all subsequent general petitions presented to the Commission through the agency of the Thána Association. The four gentlemen above mentioned were parties to the above memorial to His Excellency the Viceroy and were at that time, it is understood, prominent members of the Forest Association, through whose instrumentality it was prepared and submitted. Their subsequent preparation of an independent complaint and demand for separate hearing as representing the public at large, as well as their own individual interests, may have been due to want of confidence in the direction of affairs by the Association, or to personal dissensions. As however they subsequently took no further action of their own, and as one of their number afterwards appeared as a witness on behalf of the Association, it may be assumed that they are content to rely on the evidence brought forward by that agency, and that any difference of opinion there may have at one time existed has since been reconciled.

Vide Volume IV., pages 51 to 61.

18. The arrangement under which the entire grievances of the local population have been laid before the Commission by one single agency, *viz.*, the Thána Association, has throughout been of the greatest convenience to the members of the Commission. Failing some such plan a tedious inquiry into the merits of each separate complaint, involving needless repetition and waste of time, would have been necessary. As it is, the general grievances of the inhabitants of the district have been laid before the Commission, if in some instances with unnecessary prolixity, at least with some care and method, and the evidence

purporting to bear on each point has been produced in fairly intelligible order. Much credit for this result is due to Mr. S. H. Chiplonkar, whose services were specially engaged for this purpose by the Association.

Movements of the Commission.

19. The procedure adopted at Kolhár in respect of the memorials from the Karjat *táluka* guided our subsequent action as regards the remaining *tálukás* of Thána and Kolába. The subjoined table will show the movements of the Commission, both for taking evidence and for deliberations, the number of sittings held and the number of witnesses orally examined :—

No.	Names of Places where Sittings were held.	Period spent at each Place.	Number of Sittings.	Number of Witnesses examined.
1	2	3	4	5
1	Poona ...	From 27th to 29th August 1885	3	...
2	Thána ...	From 2nd to 3rd November 1885	2	...
3	Kolhár ...	From 10th to 21st December 1885	9	8
4	Kalyán ...	From 15th January to 17th February 1886 ...	29	28
5	Dahánu ...	From 1st to 13th March 1886	11	13
6	Bassein ...	From 22nd to 31st March 1886	8	6
7	Alíbág ...	From 7th to 17th April 1886	10	18
8	Lánoli ...	From 29th April to 10th May 1886	9	9
9	Poona ...	From 15th June to 18th December 1886 ...	42	11
		Total ...	123	93

The whole of the evidence taken, both popular and official, including the exhibits produced by witnesses, is recorded in full in Volume II. appended to this report. The replies of official witnesses to general questions have, for convenience of reference, been grouped together under each separate subject. All other answers or statements of witnesses are printed as separate depositions.

20. In Thána the local evidence was taken at four different places, the camps being selected so as to afford every facility for witnesses coming from different parts of the district, as well as to enable the members of the Commission to see as much of the country as was possible under the circumstances. The Thána inquiry involved the examination of 42 witnesses called by the Association. During the tour opportunity was also taken to examine Colonel Godfrey, Superintendent of the Thána and Ratnágiri Survey, Mr. Atkins, Forest Settlement Officer, Thána, Mr. Mádan, Sub-Assistant Conservator of Forests, and the Mámlatdárs of the respective *tálukás*. While at Kalyán the Commission also examined Ráo Sáheb Ganpatráo Malhár Bokad, Inspector of Police, Sátára, and a recognised leader of the clan of Máhdev Kolis inhabiting the Western Ghát districts, with reference to the grievances of this section of the population against forest administration. It may be noted that no separate evidence was brought forward from the Váda *táluka*. The revenue settlement of this tract being in all respects similar to that of the Sháhápur *táluka* and the complaints from each being identical, it was thought unnecessary to call separate witnesses from each *táluka*.

21. The Commission held their last sitting for recording the Thána local evidence at Bassein on the 31st March 1886. On the 7th April 1886, the Kolába inquiry was commenced at Alíbág. Mr. Ozanne remained at Bassein to make a special enquiry into the garden cultivation of the Bassein and Máhím *tálukás*—a cultivation which has been and is still in the enjoyment of peculiar privileges from forests, alleged infringements and restrictions of which enter largely in the grievances of the memorialists. The same procedure was followed here as in Thána. The Kolába Forest Sabha, a body in all respects similar to the Thána Association, undertook, at the request of the memorialists, to lay before the Commission the complaints of the inhabitants of the five *tálukás* of Alíbág, Pen, Roha, Mángaon and Mahád. As already stated the

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Pánvel petitioners, excluding the petty sub-division of Uran, confided their interests to the Thána Association on the ground that the *táluka* until recently formed part of the Thána District and that the popular grievances were identical with those of the people of Karjat. The inhabitants of the Uran sub-division of Panvel did not appear and were not specially represented before the Commission, but expressed in their joint memorial their wish to rely on the statements therein made and the documentary evidence accompanying it.

Vide Volume IV., page 76.

Memorial from the *Vatandár Khots* of the Kolába District.

22. A memorial was also received from the *Vatandár Khots* of the Roha, Mángaon and Mahád *tálukás* praying for an inquiry into their forest rights.

As the questions raised in this memorial related more to land-holders' rights than to forest administration, it was held (*vide* Government Resolution No. 2483 of 31st March 1886) that they did not fall within the legitimate scope of the inquiry of the Commission.

23. The last sitting at Alíbág was held on the 17th April and the Commission re-assembled after the Easter holidays at Lánoli on the 29th idem for the examination of the witnesses from the Panvel *táluka* and of the Secretary and another member of the Kolába Forest Association. By the 10th May 1886 the evidence of all the witnesses called by the memorialists of Thána and Kolába was completed.

24. A perusal of this evidence will show that the fullest latitude was given for the setting forth of all grievances, present and past, directly or indirectly connected with forest administration. Much of the evidence relating to past grievances and past failures might well have been omitted without prejudice to the claims advanced, and much relating to the effects of more recent regulations might perhaps with advantage to all concerned have been curtailed. But the members of the Commission felt sure that Government desired that the inquiry should be exhaustive, and were moreover anxious to avoid giving complainants the slightest ground for alleging hereafter, whether the ultimate decision of Government on the points at issue be favourable to them or not, that any of their grievances were unheard.

25. The case for the memorialists having thus been fully heard, the Commission had next to consider what evidence was available on the other side and the best means of eliciting it. Up to this time the only official evidence before the Commission were the statements of the officers mentioned in paragraph 20 and sundry exhibits from Government records which had from time to time been supplied as likely to give useful information. As no officer had been specially deputed to watch the proceedings of the Commission on behalf of Government it was all the more necessary that the fullest opportunity should be given to the local authorities concerned to produce any important evidence from the Government records, which would elucidate doubtful points or rebut, if necessary, any adverse or misleading statements made to the Commission by the memorialists' witnesses.

A thorough preliminary sifting of the evidence was therefore needed to enable the Commission to call the attention of the Collectors of Thána and Kolába to all matters which seemed to require further explanation.

26. The Commission decided therefore to adjourn for a few weeks and re-assemble in Poona on the 15th June 1886. The interval thus gained was utilized by the President and Secretary in making a careful analysis of the evidence for the purpose above specified, while it also gave the necessary time for completing the record up to date, printing the evidence and arranging and translating exhibits.

27. The Commission met again at Poona on the 15th June 1886 as arranged, and shortly afterwards the questions, which resulted from the scrutiny of the memorialists' evidence, were prepared and forwarded, together with printed copies of the evidence recorded up to date, to the Collectors of Thána and Kolába.

For the sake of clearness the questions were arranged in tabular form. In one column the heading or subject matter of the question was succinctly stated; in another references were made to all the statements of witnesses bearing on the subject; and in a third column was entered the question arising from the statements. The questions thus drafted brought to notice all specific allegations in the local evidence which seemed to the members of the Commission likely, if unexplained or unrebutted, to create an unfavourable impression as to the general policy of Government in forest matters, or to the manner and spirit in which effect had from time to time been given to such policy.

Preparation of questions as to facts deposed to by the memorialists to be answered by the Collectors of Thána and Kolába or such officers as they might depute for this purpose.

28. The object of these questions, as distinguished from others subsequently addressed to selected Government officials, was to elicit facts, not opinions. It was therefore thought unnecessary to call attention by these means to any general expressions of belief on the part of witnesses, or to any instances of palpable misinterpretation of the wording and intention of documents produced in evidence. Thus many witnesses stated in a general way their belief in the prevalence of corrupt practices on the part of subordinate forest officials. In two instances where specific allegations of receiving bribes were made by witnesses against particular forest guards, copies of the statements were sent to the authorities concerned for any further action they might deem necessary. But as no useful object would have been gained by inviting the local authorities to rebut general and unsubstantiated statements as to the existence of such practices, no reference was made to them in the questions.

Object of the questions to local authorities.

Accusations of corrupt practices.

29. Similarly a great many instances of forest prosecutions for apparently trivial offences were brought to notice by different witnesses. In a few instances where, presuming the statements of the witnesses to be correct, the facts as described disclosed obviously improper convictions, special attention was called to the evidence to enable the local authorities to correct, if necessary, any mis-statements. The accounts of some of the prosecutions as given by the witnesses are possibly highly coloured; but it was not thought necessary to ask specially for further information as to such cases in which the facts, as stated by the witnesses, in whatever light they might themselves regard them, constituted clear breaches of the law or rules having the force of law.

Forest prosecutions.

30. At the same time to avoid all possibility of the Commission having to base its conclusions on any matters on *ex-parte* evidence, the Collectors were specially invited, after examining the statements of the witnesses, to furnish any information or explanation they might deem necessary with regard to any matters to which allusion had been made in the popular evidence, but which had not been noted in the questions drafted by the Commission.

31. Messrs. Atkins and Sinclair, the Forest Settlement Officers of Thána and Kolába, respectively, were specially entrusted, with the approval of Government and under the general supervision of the Collectors, with the duty of furnishing replies to all questions as to matters of fact arising from the local evidence, and producing the necessary documentary evidence from the Government records bearing on the subject. They attended the sittings of the Commission on the 12th July, and 12th and 16th August 1886, respectively, and their replies to the several questions were then duly recorded.

Examination of official witnesses as to matters of fact arising from the evidence of memorialists.

Vide Volume II., pages 249 to 263 and 288 to 300.

32. A few other questions relating exclusively to matters of Departmental Forest management, which could be more conveniently answered by the officers in charge of the records of that Department, were referred to the Conservators with a request that they would arrange for the production of the necessary information. As many of these questions as related to the Thána District were answered by Mr. Wilkins, the District Forest Officer in charge of the Northern Division of Thána, who was examined by the Commission at Poona for this purpose on the 26th July 1886.

Vide Volume II., pages 263 to 272.

33. The examination of the three officers above mentioned cleared up, as far as was possible, all doubts as to the actual facts deposed to by the memorialists. Before proceeding however to finally discuss the various problems to be solved and make any final recommendations to Government the Commission

Opinions of official witnesses as to measures to be adopted.

Chapter I.
INTRODUCTION.

desired further to ascertain the views of certain officers, whose past experience of Thána and Kolába makes their opinion of special value, as to points not fully dealt with in the questions on general Forest Administration previously circulated.

34. The previous permission of Government having been obtained, further questions were drawn up after much care and discussion and submitted to the officers named in the margin. The examination of these witnesses, except Mr. Crawley-Boevey, whom illness prevented from attending or answering the questions, occupied the Commission from the 16th August to the 3rd September 1886. The object of the Commission was to lay before the witnesses the different modes of settlement of each important question which after preliminary discussion appeared to promise satisfactory results. The tentative schemes thus suggested have in this way been advisedly subjected to the fullest criticism of many officers well qualified to judge of their merits or demerits.

Mr W. B. Mulock, C. S.
" T. D. Mackenzie, C. S.
" A. Keyser, C. S.
" W. W. Loch, C. S.
" E. J. Ebden, C. S.
" A. W. Crawley-Boevey, C. S.
" A. T. Shuttleworth.
" W. F. Sinclair, C. S.
" A. DeC. Atkins, C. S.
" K. M. Thatte.

The answers to these general questions, which are printed in the form of a summary at pages 306 to 347 of Volume II., although disclosing widely divergent views as to the measures necessary to be adopted, form a most valuable addition to the evidence before the Commission. Answers to the same questions prepared by the Secretary of the Thána Forest Association have also been received and considered (*vide* Volume II., pages 348 to 358).

35. Numerous questions were also put by the Commission to the several official witnesses at the instance of the local associations. The answers are duly recorded in the printed Volume (II.) of evidence. As a rule all the questions to official witnesses were communicated to them some time before the date fixed for their examination. They were thus enabled to study the questions carefully beforehand, and bring written replies. Much time was thus saved, as the oral examination was limited in most cases to a few further questions arising out of the answers already prepared.

36. The last public sitting of the Commission for taking evidence was held on the 3rd September 1886. But the replies of the Thána Association to the general questions alluded to in the preceding paragraphs were not received till the 21st October 1886.

Attendance of the public and press.

37. The meetings of the Commission, except those held for discussion, were throughout open to the public. During the local inquiries in the Thána and Kolába districts considerable interest was shown in the proceedings, and the sittings were numerously attended by all classes of the population. The evidence of the witnesses was reported in full by both the Thána vernacular newspapers, and from time to time, when important evidence was expected, the meetings were attended by representatives of the three Bombay daily newspapers, who published full reports of the statements made by the witnesses.

Preparation of report.

38. From the 17th September to the 18th November 1886 the Commission held frequent sittings to discuss the general terms of its report and the particular measures to be recommended. An adjournment was then made to the 17th December to enable the President and Secretary to prepare the draft report. On the 17th and 18th December the report was considered and provisionally adopted. On the latter date the Commission was adjourned *sine die*, pending the orders of Government as to the disposal of the memorials from districts other than Thána and Kolába which have not been made the subject of special inquiry by the Commission.

39. The general report bears the signatures of all the members of the Commission. The minutes of some of the members who have thought it necessary to record independent remarks are duly appended.

Record of Commission.

40. The printed record of the labours of the Commission has been compiled as under :—

Volume I.—Procedure—Review of evidence—Recommendations.

Volume II.—Oral evidence and exhibits produced by witnesses.

Volume III.—A summary of answers to the questions on forest administration circulated by the Commission.

Volume IV.—Miscellaneous papers and statistics.

41. In the last volume many papers of interest and importance, which have found no place as exhibits in Volume II, have been brought together and reprinted, together with all the statistical information collected by the Commission and the English memorials received from Thána and Kolába. The Commission believes that Government would wish the record of the Commission to contain as complete a history as possible of the various forest questions which have had to be dealt with from time to time, and to form a compact work of reference, beyond which no officers having occasion to study the subject hereafter need search for any information likely to prove material. Maps to illustrate the forest demarcations of Thána and Kolába are appended to the report.

CHAPTER II.

STATISTICAL ACCOUNT OF THE THÁNA AND KOLÁBA DISTRICTS.

Chapter II. — STATISTICAL ACCOUNT.

As stated in the Introduction our inquiry and report are confined to the Northern Konkan districts of Thána and Kolába.

2. Statement No. I., printed in Volume IV., page 220, gives the details of area, population, forest, &c., of each of these districts.

Situation, population, area and revenue of Thána.

3. Thána, lying between 18° 42′ and 20° 20′ north latitude and 72° 45′ and 73° 48′ east longitude, has an area of about 3,935 square miles, a population of over 800,000 souls, or 203 to the square mile, and a realizable land revenue of Rs. 11,82,930.

4. Of the total area (acres 2,394,826), nearly 33 per cent. (acres 799,021) is Government forest, 30 per cent. (acres 711,347) is waste, and 27 per cent. (acres 654,724) consists of *varkas* land included in private holdings, part of which is periodically cultivated and part available for the growth of trees and grass.

Situation, population, area and revenue of Kolába.

5. Kolába, with a length of about 85 miles from north to south, and a breadth of from 15 to 30 miles from east to west, lies between 70° 55′ and 73° 43′ east longitude and 19° 6′ and 17° 50′ north latitude. It has an area of 1,800 square miles, a population according to the census of 1881 of about 480,000 souls, or 266 to the square mile, and in 1880-81 had a realizable land revenue of about Rs. 9,37,140.

6. Of the total area (acres 1,107,090), nearly 22 per cent. (acres 244,564) is Government forest, 29 per cent. (acres 326,676) is waste, and 34 per cent. (acres 376,663) consists of occupied *varkas* or upland.

Aspect.

7. The Northern Konkan has been described in the Gazetteer under the two divisions of coast and inland. There is not much forest land in the former, but in the latter tract, which includes the western slopes of the Sahyádri hills for upwards of 100 miles, are situated some of the best forests of the Bombay Presidency, except the North Kánara jungles and perhaps those of the Sátpudás. A full description of these forests will be found in the Bombay Gazetteer, Volume XI. (Kolába) and XIII., Part I., (Thána). Mr. Shuttleworth, the Conservator of Forests, Northern Circle, has taken special pains to impress upon our minds the very great obligation which the British Government has incurred to manage these properties for the common weal, and there is no doubt that their importance from climatic and economical points of view cannot be overrated.

Formation of the districts.

8. Of the territories comprised in the Northern Konkan, the islands of Salsette, Elephanta, Hog Island and Karanja were conquered by the British at the close of 1774. The rest of the district, except the territories which belonged to the Angria, was ceded by the Peshwa under the treaty of Poona in June 1817. In 1840 on the death without issue of Rághoji Angria, the Kolába State, including the present Alíbág *táluka* and the north-west part of Roha and several groups of villages now in the Panvel and Karjat sub-divisions, lapsed to the British.

9. In 1817, on the acquisition of the Konkan, Thána, which had been the civil station of Salsette, became the head-quarters of the North Konkan, and at first Bánkot and in 1820 Ratnágiri became the head-quarters of the South Konkan, including Kolába. In 1830 Kolába, Rájpuri and Ráigad were transferred from the South to the North Konkan, which was then made a principal Collectorate with the South Konkan as a subordinate Collectorate. This arrangement lasted only for two years. In the beginning of 1833 these two divisions of the Konkan were, without territorial changes, formed into the two Collectorates of Thána and Ratnágiri. Twenty years later (1853) the three southern sub-divisions of Sánkshi, Rájpuri and Ráygad, together with the Kolába Political Agency consisting of the Underi and Revdanda sub-divisions, were formed into the Kolába Sub-Collectorate and placed under Thána. This arrangement lasted till 1869, when, without territorial change, Kolába was separated from Thána and raised to a Collectorate. In 1883 the sub-division of Panvel was transferred to Kolába.

Subdivisional changes.

10. Various changes in the internal or sub-divisional distribution of both the Thána and Kolába districts have been made from time to time. The only

changes in Thána which need be noted here were that the old Kolvan and Sanján *tálukás* were broken up in 1866. Of the Kolvan villages the greater part went to form the present Váda and Shahápur *tálukás*; while most of the Sanján villages are included in the modern Dahánu *táluka*, the rest having been transferred to Máhim. In Kolába the most important changes were as follows: In 1866 Sánkshi was named Pen, Rájpuri was named Roha, Ráygad was named Mahád and Underi and Revdanda were united to form the sub-division of Alibág. In 1866-67 the Tale and Nizámpur petty divisions of Rájpuri and the Goregaon petty division of Ráygad were abolished and the new sub-division of Mángaon was formed out of them.

Existing sub divisions.

11 The present sub-divisions are :—

Of Thána—beginning from North—Dahánu, Máhim, Váda, Shahápur, Bhivandi, Bassein, Salsette, Kalyán, Murbád and Karjat.

Of Kolába—Panvel, Alibág, Pen, Roha, Mángaon and Mahád.

Peculiar characteristics of the districts under notice.

12. The natural conditions of soil and rainfall in the North Konkan districts are exceptionally favourable to tree-growth. Forest conservancy in these tracts is nevertheless difficult owing to several artificial causes. The drain to meet export and local demands is exceptionally heavy. Railways and waterways bring these Konkan forests within easy reach of large markets such as Bombay, Poona and Surat, whence the demand for forest produce of all kinds is very great. Local methods of cultivation also necessitate the annual consumption of enormous quantities of ligneous vegetation for ash manure. The resident population has for years past drawn large supplies of wood from the forests for domestic and agricultural purposes. The cheapness and abundance of wood in former times has no doubt induced a lavish local consumption, especially of fuel. The heavy rainfall and consequent dampness also makes firewood a greater necessity to the Konkan rayats than to the inhabitants of the Deccan. A large proportion of the population, moreover, consists of poor and unsettled tribes, who depend almost exclusively for their subsistence on the wages they earn as collectors and distributers of forest produce, and who are as a class bitterly opposed to all regulations interfering with a free and unrestricted use of the forests. We will give below as much detailed information as we have been able to collect as to the special conditions which most closely affect the question of forest conservancy in the Konkan districts.

Climate and rainfall.

13. From the Thána Volume of the Bombay Gazetteer we find that "the climate of Thána, like the climate of the rest of the Konkan, is exceedingly moist for fully half the year, the rainfall being very great and often beginning in May. The south-west monsoon usually sets in early in June and the rains continue to the end of September. The average fall of rain registered at the Thána Civil Hospital for the thirty years ending 1880 is 99 inches and 98 cents. During this period the highest fall recorded was 156·25 inches in 1851, the next 152·76 inches in 1878 and the lowest 64·78 inches in 1871." The average of the rainfall gauged at the several stations for the 21 years ending 1880, was also nearly 100 inches. Similarly the rainfall in the Kolába District for 23 years ending 1880 averaged 80 inches, varying from 144 inches in 1878 to 40 inches in 1871.

Communications, Thána.

Railways.

14 As remarked above, the forests of Thána and Kolába, except those of east Váda and Mokháda, are as a rule accessible to centres of trade both by water and land. In Thana the total length of roads in 1882 was 228 miles. This includes the two main inland communications across the Bor and Thal passes (Poona and Agra roads) and also many less important local roads traversing the district. The railways passing through Thána are thus described in the Gazetteer: "Two main lines of railway pass through the district with a total length of about 215 miles. The Baroda railway runs 95 miles along the coast north to Gujarát. The Peninsula Railway runs north-east twenty-four miles to Kalyán and there divides into the south-east or Poona branch which after 44 miles to the south-east leaves the district by the Bor pass, and the north-east or Jabalpur branch which after 49 miles to the north-east leaves the district by the Thal pass. Between Sion, the point where the Peninsula line enters the district, and Kalyán there are six stations—Kurla 9½ miles from Bombay, Ghátkopar 12 miles, Bhándup 17 miles, Thána 20½ miles, Diva 26 miles, and Kalyán 33¼ miles. From Kalyán on the north-east line are seven stations, Titvala 40 miles, Khadavli 45 miles, Vásind 49½ miles, Shahápur

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53¼ miles, Atgaon 59 miles, Khardi 66¾ miles and Kasíra 75 miles. From Kalyín on the south-east line are seven stations, Hala Gate 37½ miles, Badlípur 42 miles, Vángni 48¼ miles; Neral 53½ miles, Chinchavli 57¼ miles and Karjat 62 miles. From Palasdari a line with two stations, Kelavli 67 miles and Khopivli 71 miles, branches to the foot of the Sahyádris about eight miles south of the Bor pass." Since the above account was written a new station called Mumbre has been added between Thána and Diva, and the name of the Hala Gate Station has been changed to Ambarnáth.

The Baroda railway runs for 95 miles along the coast from Bombay to the border of Surat. In these 95 miles are 16 stations, Bandra 10½ miles from Bombay, Andheri 15 miles, Goregaon 18 miles, Borivli 22½ miles, Bhiyandar 28¼ miles, Bassein Road 33½ miles, Virár 38½ miles, Saphála 48½ miles, Palghar 57¾ miles, Boisar 64¾ miles, Vángaon 70½ miles, Dahánu Road 78 miles, Gholvad 85 miles, Vevji 90¾ miles, Sanjín 94 miles and Bhilád 101¼ miles.

Traffic in forest produce.

15. We have collected some statistics as to the quantity of forest produce exported every year from Thána by sea and rail. The B. B. & C. I. Railway was unable to give us the information required, except at a cost which we considered prohibitive. The figures of export obtained from the G. I. P. Railway and the Customs Department are given in the tables printed in Volume IV.

Export of wood by sea.

The customs returns show that in the year ending 31st May 1885 the exports of timber and firewood from the different ports in the Thána district were as follows:—

Number of Consignees.	Timber.		Firewood.		Total Value of the Export in Rupees.
	Quantity in Tons.	Value in Rupees.	Quantity in Tons.	Value in Rupees.	
735	19,454	1,76,380	49,824	1,74,415	3,50,795

Thus the value of the total exports was about 3½ lacs. The material was principally exported to Bombay and Gujarát.

Export of wood by G. I. P. Railway.

16. Similarly for the same period the export of wood from the different Thána railway stations on the G. I. P. lines was as follows:—

Number of Stations.	No. of Consignees.	Timber.	Rafters.	Firewood.	Charcoal.	Bamboos.
		Tons.	Tons.	Tons.	Tons.	Tons.
16	561	3,254	4,775	26,714	3,188	160

The consignments were chiefly sent to Bombay and Poona.

Examination of the trade returns of past years

17. On examining the trade returns given in the Thána Gazetteer a progressive development of the export trade, especially in firewood, is noticeable. The exports and imports of firewood and timber from the G. I. P. Railway stations during the years 1873, 1878 and 1879 given therein compare as follows:—

Year.	Firewood.		Timber.	
	Outward.	Inward.	Outward.	Inward.
	Tons.	Tons.	Tons.	Tons.
1873	14,160	104	2,669	267
1878	19,623	1,682	281	103
1879	21,354	1,099	656	56

The inward traffic includes Malabár and Burmah teak imported from Bombay for house-building. We find it stated that "Shahápur and Karjat had risen to importance sending firewood from the Kasára, Khardi, Atgaon, Vásind and Titvála railway stations on the Násik, and from Badlápur and Neral on the Poóna branch of the Peninsula Railway."

18. The extent of traffic in wood on the Thána stations of the B. B. and C. I. line is shown as under :—

Year.	Firewood.		Timber.	
	Outward.	Inward.	Outward.	Inward.
	Tons.	Tons.	Tons.	Tons.
1873	1,893	79	26	78
1878	868	87	150	69
1880	18,861	1,365	39	19

19. Similar statistics are not given in the Gazetteer for the sea-borne traffic, but the following information regarding the export of forest produce from the different ports is gleaned from the same source :—

No.	Division.	Ports.	Remarks as to Articles of Traffic.
1	Umbargáv ..	Kálai, Maroli, Gholvad, Umbargáv.	Among the chief exports are mentioned timber, firewood and bamboos to Bombay, Gujarát and the neighbouring Thána ports. Part of the timber is said to be brought from Daman, Dharampur and Navsari and some of the bamboos as coming from the Shahápur forests.
2	Tárápur .	Tárápur, Dahánu, Navápur, Sátpáti, Máhim, Kelva, Dátivre.	Among the chief exports produced in the division and in the neighbouring State of Jawhar is mentioned 'firewood' as being sent to neighbouring Thána ports, to Bombay and to Gujarát
3	Ghodbandar .	Vesáve, Utan, Manori, Bándra, Ghodbandar, Rái.	Firewood is exported to Panvel, Belápur and other Thána ports. Among the imports are also mentioned timber and firewood as coming from Kalyán, Bhivandi and Thána.
4	Bassein .	Agáshi, Bassein, Navghar.	'Firewood' to and 'timber' from Bombay.
5	Trombay .	Trombay, Bhándup, Máhul, Thána, Kalyán, Bhivandi.	Among the articles of export we find 'hay' as taken to Bombay, timber and firewood to the neighbouring Thána ports, teak rafters and firewood to Kolába. Among the imports are mentioned timber, firewood and *shembi* bark from the neighbouring Thána ports and *shembi* bark also from Ratnágiri.

20. The details of export from the above ports are not available, but it is stated that in 1880-81 the total value of the timber and firewood exported to Bombay and Gujarát from the Thána district was Rs. 5,03,290[1] or 3·36 per cent. of the total sea-borne export trade. The value of the total imports of firewood and timber for the same period was Rs. 1,82,750. In these so-called imports, however, is included much of the internal trade of the district, as for instance consignments of wood from the northern ports of Thána to the southern ports. But they include also some consignments of firewood from Habsán or Janjira, and also of Malabár and Singápur timber for house-building through Bombay.

21. In addition to timber, firewood and bamboos, other forest produce, such as grass, cigarette leaves, myrobalans, *mowra* flowers and *kárvi* are exported from different parts of the Thána District to Bombay.

Export of grass.

The export of grass has increased very largely in recent years with the growing demands of Bombay. Owing to the establishment of presses and the reduction of railway freights grass can now be profitably exported from stations as far from Bombay as Shahápur on the Násik Branch of the G. I. P. Railway. In Sálsette, as we understand, it is found in many cases more profitable to grow grass than rice in rice fields close to Bombay. While the Commission was sitting at

[1] This includes the figures for 7 ports coming under the Panvel and Uran divisions, which have since 1883 been transferred to the Kolába District (*vide infra* page 16).

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Dáhánu, the President and one of the members examined, with the permission of the Station Master, the export returns of grass from that station to Bombay and other places during the season of 1885-6. The result was placed before the Commission in the form of a note which has been printed in Vol. IV, at page 123. This note showed that from the commencement of the season up to the 6th of March 1886, 668 tons of green grass and 369 tons of dry grass had been exported. Had the green grass been kept till it became dry the weight of the grass exported would have been about 501 + 369 = 870 tons. The average yield of one acre of grazing land may be taken as 2,000 bundles of an average weight of 1¾ lbs. At this rate, the entire grass produce of about 550 acres must have been exported from lands in the immediate vicinity of the Dáhánu Road Station to Bombay and other places. Mr. Sinclair's memorandum on the export of grass from Panvel (*vide* Volume IV., pages 143 to 155) shows similarly how the grass trade with Bombay has developed in that tract.

Communications Kolába.

22. The Kolába Gazetteer shows that in 1881 there were 12 roads of the total length of 187 miles in that district. The main trunk road runs north and south, nearly 70 miles, from Dharamtar *viâ* Nágothna, Kolád, Mángaon, Mahád and Poládpur to the foot of Mahábleshvar. It has several useful branches connecting the places of trade situated to the east and west of the line. Besides the main trunk road and its branches there is a 15-mile road from Revas to Alibág. From Dharamtar east to Khopivli at the foot of the Bor pass there is a first class road of 25 miles. In 1880-81 a new line was opened over the Kárli pass, thus completing the Alibág-Dharamtar road and opening a through traffic from Khopivli to Alibág. The Kolába district is also connected with the Poona and Sátára districts above the Ghats by several passes, the chief of which are the Pár, the FitzGerald, the Varandha and the Bor passes.

Inland traffic.

23. As there is no railway in the Kolába district, no statistics of inland traffic are available, but among the articles of export are mentioned timber and firewood. It is also said that of late years there has been a gradual but marked increase in the import of beams and planks of Malabár teak.

Sea-borne traffic.

24. There are twenty ports in all in the Kolába district. For customs purposes they are divided into six divisions. The details are given in the margin. From most of these ports, hay, fuel, timber, firewood and charcoal are exported to Bombay. The returns of the Kolába sea trade (1880-81) given in the Gazetteer include only the ports coming under the Alibág, Pen and Rájpuri divisions. The exports and imports of forest materials from these ports in 1880-81 were as follows :—

No.	Division.	Ports.*
1	Panvel ...	Panvel. Belápur. Chembhur. Kherna
2	Uran ...	Mora. Karanja Sheva.
3	Alibág ...	Alibág. Thal. Revdanda. Roha. Mandve. Revas. Dharamtar.
4	Pen ...	Antora (Pen). Nágothna.
5	Rájpuri ...	Talkhádi.
6	Bánkot ...	Ghodegaon. Dágaon. Mahád.

* Except Belápur, Chembhur, and Kherna which are situated in Salsette *táluka* the ports under the first two divisions were transferred to Kolába in 1883. The last division includes also some Ratnágiri ports.

Articles	Import.	Export.
	£	£
Charcoal	34	3,162
Timber	1,006	1,115

Population.

25. The following extract from the Gazetteer gives the details of population of Thána and Kolába.

Writing of Thána Mr. Campbell says :—

"In 1819 and in 1820 severe outbreaks of cholera so lowered the number of the people that for 10 years the population is said not to have recovered its former strength. Since the beginning of the British rule the people have been four times numbered—in 1846, 1851, 1872 and 1881. In 1846, excluding the three Kolaba sub-divisions of Sánkshi, Rájpuri and

Ráygad, but including Panvel, which has recently been transferred to Kolába, the total population amounted to 554,937. The 1851 census compared with that of 1846 showed an increase in population from 554,937 to 593,192 or 6·89 per cent. The 1872 census showed a further increase from 593,192 to 847,424 or 42·85 per cent. The 1881 census showed a slight increase of 2·69 per cent., the total population of the district amounting to 900,271."

26. As the Kolába District was made a Sub-Collectorate only in 1852 the census details of that district are not available for 1846 and 1851. According to the census of 1872 the population of the district, excluding Panvel, was 350,405. The census of 1881 showed an increase of 8·91 per cent., the total population amounting to 381,649.

27. The above figures show that there has been a steady increase in the population of the Northern Konkan since the introduction of the British rule, and that during the last half century the population of Thána, for which alone the old statistics are available, has increased by 62 per cent. It is needless to say that the local demand for forest produce and arable land has also increased in a corresponding ratio.

Wild tribes.

28. We have mentioned above the existence of a large unsettled population in the North Konkan, as one of the causes which render forest conservancy difficult. As the general condition and claims of the wild tribes have been fully described in a separate chapter, we need not give here any detailed information as to their numbers.

Agricultural statistics.

29. We will now examine the agricultural statistics of the two districts. We have before us specially prepared returns showing the area under cultivation, &c., for the year 1884-85. They are printed as appendices to this report in Volume IV. We have also received the statistics for the year 1885-86 from the Director of Agriculture. These have since been published as accompaniments to the Director's report, but an extract from them as regards the Konkan districts is given in our Volume IV. There is not much difference in the extent of cultivation, &c., between the figures for 1884-85 and 1885-86. The returns for the former year show that in round numbers the total area of the Thána District amounts to 24 lacs of acres; 10 lacs of which are occupied either for cultivation or purposes incidental to cultivation; about 8 lacs are reserved as public forests; 3 lacs are available for either extension of cultivation or other communal purposes such as grazing or *ráb* grounds; and about 3 lacs are unculturable waste, being the area under village sites, rivers, streams, roads, &c. The details of the occupied area of 10 lacs of acres are as follows:—

Sweet rice.	Salt rice.	Garden land.	*Rabi.*	*Varkas.*		Total.
				Náchni, vari, khurásni, tur, &c.	Fallow and uncultivated land yielding grass, leaves, tree loppings, &c., for ash manure.	
Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
296,773	31,178	10,247	8,292	169,143	485,581	1,001,214

30. The total area of Kolába is about 11 lacs of acres, of which six lacs are included in *rayatvári* and 5 lacs in *khoti* villages. Of the total of 11 lacs, 3 lacs in *rayatvári* and rather less than 3 lacs in *khoti* villages, are occupied for cultivation or purposes subsidiary to cultivation; about 2 lacs ($1\frac{1}{4}$ in *rayatvari* and $\frac{3}{4}$ in *khoti* villages) are State forests; 43,000 acres (36,000 in *rayatvári* and 7,000 in *khoti* villages) are available for extension of cultivation or communal allotments for grazing and other purposes; and $2\frac{3}{4}$ lacs ($1\frac{1}{2}$ in *rayatvári* and $1\frac{1}{4}$ in *khoti* villages) are unculturable waste, consisting of the areas under village sites, rivers, streams and salt marshes.

Chapter II.

STATISTICAL ACCOUNT.

Agricultural Statistics.

The details of the occupied area of nearly 6 lacs, 3 lacs in *rayatvári* and rather less than 3 lacs in *khoti* villages, are as follows :—

Sweet rice.		Salt rice.		Garden land.		*Rabi.*		*Varkas.*				Total.	
								Náchni, vari, khurásni, tur, &c.		Fallow and uncultivated land yielding grass, leaves, tree loppings, &c., for ash manure.			
In *Rayatvári* villages.	In *Khoti* villages.	In *Rayatvári* villages.	In *Khoti* villages.	In *Rayatvári* villages.	In *Khoti* villages.	In *Rayatvári* villages.	In *Khoti* villages.	In *Rayatvári* villages.	In *Khoti* villages.	In *Rayatvári* villages.	In *Khoti* villages.	In *Rayatvári* villages.	In *Khoti* villages.
Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
97,000	52,948	46,371	..	3,730	39	6,837	3,512	49,266	123,454	100,415	103,528	304,519	283,481
150,848		46,371		3,769		10,349		172,720		203,943		588,000	

31. The figures given above for the Thána District, show that there are about three lacs of acres of sweet rice land, the greater part of which requires *ráb* for its cultivation. Of the 6½ lacs of occupied *varkas* lands, about 170,000 acres are under annual cultivation. This land requires as a rule a fallow after 3 years' consecutive cropping. *Náchni* (Eleusine coracana) is usually grown in the first year, *vari* (Panicum miliare) in the second and *khurásni* (Verbesina sativa), *til* (Sesamum indicum), *harik* (Paspalum scrobiculatum), and other inferior grains in the third year. The cultivation of *náchni* and *vari* requires *ráb* in the same way as rice. The seedlings of the other *varkas* crops are not raised in nurseries prepared with ash manure. The duration of fallow of *varkas* land varies according to soil from 3 to 10 years. It may be assumed as a general rule that one-third of the total area under periodical cultivation is yearly cropped and that two-thirds are fallow. It may also be assumed that the fallow portion yields just sufficient grass, leaves and brushwood for the *náchni* and *vari* crops. Thus of the whole occupied *varkas* area of the Thána District, *viz.*, 6½ lacs acres, about 5 lacs appear to be under periodical cultivation. This leaves a balance of 1½ lacs of acres, which we may presume to be exclusively available for supplying the *ráb* material required for the cultivation of about 3 lacs of rice cultivation.

The circumstances of Kolába are in this respect somewhat different. In the southern *tálukás* of Mahád, Mángáv and Roha the *varkas* cultivation more resembles the dry-crop cultivation of the Deccan. A very large proportion of the occupied *varkas* area in those parts is thus devoted to independent cultivation, instead of being kept, as in Thána, for purposes subsidiary to rice cultivation. Thus out of 3¾ lacs of occupied *varkas*, nearly half is under annual cultivation and probably only a very small proportion of the whole occupied *varkas* area is exclusively available as a source of *ráb* supply for the rice cultivation.

Forest Receipts and expenditure.

32. The forest receipts and expenditure of both districts from 1864-65 to 1884-85 are shown in the statements XII. and XIIA printed at pages 233 and 234 of Volume IV. The Thána forests have been worked at a profit continuously from the year 1870-71 to the present time. Up to 1881-82 the gross receipts have not in any year exceeded two lacs. In that year they rose to 2¼ lacs, in 1882-83 to 2¾ lacs, in 1883-84 to about 3 lacs, and in 1884-85 to a little over 3 lacs. In Kolába the profit and loss as shown by the statement has been subject to many fluctuations. On the whole, however, the revenue has shown little or no tendency to increase during the past twenty years.

Live-stock.

33. The earliest returns of live-stock appear to have been compiled in 1846. Their accuracy, however, is somewhat doubtful, and there are no survey figures with which to check them. Systematic returns have been kept only from the introduction of Hope's Forms in 1873-74. The Thána Gazetteer gives the figures in that district for the seven years ending 1879-80. The Kolába Gazet-

teer shows only the figures for 1880-81. We made an attempt to ascertain the number of cattle in each *táluka* in the first year of the introduction of the Survey Settlement, but the information supplied by the *mámlatdárs* on this point has been rejected as useless for purposes of comparison. We have obtained the figures of both the districts for the years 1884-85 and 1885-86 from the office of the Director of Agriculture. The following statement will show the present live-stock of the two districts as compared with that of the previous years for which similar information is available: —

District.	Year.	Cattle.	Other live-stock.	Total.	Remarks
Thána	1846 ...	386,658	50,151	436,809	
	1873-74 ...	325,319	36,343	361,662	
	1874-75 ...	350,533	36,747	387,278	
	1875-76 ...	356,655	39,645	396,300	
	1876-77 ...	353,404	44,211	397,615	
	1877-78 ..	354,653	50,004	404,657	
	1878-79 ...	352,147	45,597	397,744	
	1879-80 ...	354,338	43,669	398,007	
	1884-85 ...	312,677	34,992	347,669	Do not include Panvel figures.
	1885-86 ...	318,165	37,673	355,838	
Kolába	1880-81 ...	132,291	16,145	148,436	
	1884-85 ...	172,415	21,001	193,416	Include Panvel figures.
	1885-86 ...	168,897	20,175	189,072	

The decrease in the Thána live-stock during the last two years is only nominal and is due to the exclusion of the figures for the Panvel *táluka* which was transferred to Kolába in 1883. For the same cause a corresponding increase is shown under Kolába. On the whole the variations in the stock returns for the past ten years have been very slight. Some of the witnesses examined by us have stated that in recent years the number of cattle has sensibly decreased. No doubt in places there has been a considerable diminution on account of the cattle-disease (rinderpest) which has been infesting the coast districts in recent years, but we have found no warrant for the allegation that any decrease in the number of cattle has been due to measures of strict forest conservancy.

CHAPTER III.

HISTORICAL REVIEW OF THE FOREST ADMINISTRATION OF THE NORTH KONKAN UP TO 1863.

Chapter III. HISTORICAL REVIEW.

Before discussing the merits of the various complaints now made by the inhabitants of Thána and Kolába, it is necessary to review the Forest Administration of these districts from the earliest periods of which there are available records. The Prècis of correspondence and orders which has been specially prepared for us by Government (*vide* Volume IV., pages 1 to 21,) contains in a condensed form most of the information necessary on this subject. Our task has thus been materially lightened. The account given below is intended merely to supplement the early history given in the Prècis, by further elucidating certain points mentioned therein, and bringing to notice any new facts of importance, disclosed by the examination of the records placed at our disposal. We do not however propose to review in this chapter the various measures of importance which took place between the appointment of the first Forest Committee in 1863 and the present time. These measures have been summarised in the Prècis in their chronological order, and the more recent forest history of the Konkan districts will be fully related in the subsequent chapters dealing with the popular complaints.

Forest administration under former Governments.

2. With the exception of Regulation I. of 1808, which gives the previous revenue history of the island of Salsette, there appears to be no record of the practice of former Governments with respect to the preservation of timber in the Konkan districts. But there is reason to believe that the Marátha Government exercised sovereign authority over the public forests in other parts of the Konkan, as well as in the island of Salsette. The Regulation mentions the new taxes which the Marátha Government imposed in Salsette. Among these taxes are mentioned '*Vancharái*' or tax on grazing cattle, a duty on the export of hay, straw and *ghee*, and '*Van Makta*', which is described as the general duty on cutting wood from the hills which were leased out to a farmer. The letting out of 'hay grounds' was also one of the new items of revenue introduced by the Maráthás. In 1839, Mr. Pringle, the then Collector of Thána, in reporting[1] on the subject of the preservation of teak timber, remarked that the right to restrict the cutting of the more valuable kinds of timber seems to have been clearly recognised and acted upon by the former Government. This view is also corroborated by the documents from the Poona *daftar* which were put in as evidence in Tipnis' case to prove that the teak trees were royalties under the late Government. One of these papers (No. 66) referred to the prohibition which had then recently been imposed against the felling of teak in a certain *taraf*. This prevented the cultivation of *varkas* which had lately been taxed; but to prevent undue restriction of cultivation, it was ordered that "the teak jungle shall be preserved where it is thick, where it is thin let the *rayats* clear it." In 1838 Mr. Duncan Davidson, then an Assistant Collector in the Thána Zilla, in recommending that the cutting of trees in forests should be regulated, remarked as follows :—"Under the former Government I learn there were orders in some districts forbidding the cutting of particular sorts of wood under a certain size and age, but the detail of this system of control and management and the particular localities to which it was applied I have been unable to discover." It is also a well known fact that the former Governments preserved particular lands as forests whenever the State interests called for such interference. The reservations of the teak forests of Tudil, Vinhere, Málvan, and Band-Tivra are evidence of the exercise of such rights by the Peshva's and the Angria's Governments.

3. It seems clear from the above that the former Governments asserted their seigniorial right over the tree produce of the waste lands of the country for imperial or revenue purposes, according to the demands of the day, and that they, both in their own interests and that of the people, appropriated certain parts of the forests for imperial purposes and regulated the cutting by the local residents

[1] The Pendse case, page 110

in the other parts. At the same time the inhabitants were allowed to obtain all the produce they required for domestic and agricultural purposes from the public forests without let or hindrance. This was only natural considering the circumstances of the Konkan at the time. There was no such demand for timber and fuel for trade purposes as now. Both under the former Governments and for some time after the introduction of British Rule, the Konkan forests were valued solely as depôts for supplying knees and other timber for ship building.

4. The following extract from Mr. Nairne's memorandum shows the state of the Konkan previous to 1818 :—

"It is necessary to remember that so lately as when Elphinstone wrote his history he described the Konkan as formerly 'a thinly inhabited forest, from which character it has *even now* but partially emerged;' that about the same time Sir J. Malcolm, then Governor, could only look forward to the improvement of the 'hitherto unproductive island of Salsette' by respectable and opulent natives of Bombay settling in it; and that some years before this, but long after we got possession of the island, it was seriously proposed to import Chinese emigrants to bring the same Salsette under cultivation. The descriptions of Captain Dickenson in his reports on the inland parts of this Collectorate show that at the end of the Peshwa's rule the whole country was lying waste and unpopulated. That up to about 1850 waste land was everywhere so abundant as to create a feeling of despair as to the future of the district, that the increase of cultivation was so much desired that the poorest people were allowed to cut down as many trees as they liked merely for the purpose of clearing the land, and that wood itself was so abundant that every one cut where and as he liked."

From accession of British Government to 1839.

5. Under the British Rule also, the necessity of conserving the forests does not appear to have been recognised till some years after the northern Konkan was acquired, although in some few instances efforts were made to improve the teak growth of special areas by maintaining a small establishment or by encouraging the private proprietors to do the same. A letter from Mr. Ardesar Dády (the origin of whose position as the proprietor of certain villages in Salsette is related in Section LV. of Regulation I. of 1808) shows that in the year 1810, he promised to follow out the recommendations of Government for the preservation and improvement of valuable timber standing within his boundaries. We also find that on 29th March 1810 Government sanctioned an establishment of Rs. 20 per month for a Superintendent and Rs. 20 per month for four peons with the view of encouraging the growth of teak timber in Salsette.

Mr. Dunlop's Proclamation.

6. In 1823 Mr. Dunlop, the Collector of the Southern Konkan, which then included the three southern *tálukás* of Kolába, namely, Sánksi, Rájpuri and Ráygad, recommended to Government that the right to teak and other valuable trees should be parted with to the rayats. The following extracts from his letter (*vide* Vol. II., pages 408 to 411,) to Government show the circumstances under which this surrender was proposed :—

"21. The subject on which my opinion is required in the second paragraph is one of considerable difficulty, and I must state some circumstances connected with the question, in order to enable Government to judge of the grounds of my opinion.

"22. In the first place we see that the two forests in the Suvarndurg *táluka* and one near Málvan which were carefully preserved by Government contained almost as much teak as the space would admit of, and there is scarcely such a thing as a teak tree of any size to be found in any other part of the collectorship.

"23. This probably may be owing in a great measure to the mistaken policy of the Native Governments in appropriating to themselves without exception all trees of this description that were worth taking, but I have also learnt a variety of other circumstances that seem to me likely to produce nearly the same effect.

"24. In the first place all Konkani agriculturists entertain an opinion that without burning grass, boughs of trees, and in short all vegetable substances they can get on their fields, no tolerable crop is ever produced. I shall not pretend to say whether substitutes for this mode of manuring might not be found, but the practice itself is universal.

"25. Portions of hill producing jungle are, therefore, assigned to each field or division of fields, for the purpose of supplying this manure (called *ráb*) and particular plants are known to the husbandmen to be much superior in their effects to others; these it is not my present purpose to enumerate, but teak is not only the worst of the whole for this purpose, but wherever it becomes once established destroys all others.

26. The teak tree sheds its leaves at an earlier season than others and the leaves soon become so wasted by the weather as to retain but little substance, and neither the leaves nor

the wood are found to be of almost any use for burning on the fields from some peculiar property of the tree, also grass and other plants do not grow under it, so that altogether it is extremely unpopular with the cultivators and would never be suffered to grow, except for the qualities of its timber.

"27. For these reasons I fear it is vain to hope that we should ever be able (even if it were desirable, which is doubtful) to offer sufficient encouragement to induce the natives to grow teak except where there is more hilly jungle than they require for the use of their fields, and in such situations, there seems little doubt but the measure proposed in Sir T. Munro's minute of declaring all teak to be the property of any individual who might grow it would in process of time lead to the wood being preserved, which is all that is necessary, for teak springs up spontaneously almost all over the Konkan.

"28. The present forests are quite recognized as Government property and not liable to the principal objection urged against the Government claims in Malabár 'of being undefined.' The question here is not whether a doubtful claim ought to be enforced, but whether a valuable property shall be relinquished. I therefore think that the established forests should be retained by Government, and with the hope of encouraging the growth of teak that a proclamation should be issued surrendering all the claims asserted by former Governments to teak or other valuable woods, and declaring that wherever these may be found beyond the limits of the three forests of Band, Tudil and Vinhere in the Suvarndurg *táluka*, and of Mahán near Málvan, they shall henceforth be the full and exclusive property of the persons on whose grounds they may grow, who shall be free to cut, or dispose of such trees in any way they choose."

Government in their reply No. 1630, dated 1st November 1823, approved of the suggestions contained in paragragh 28 of Mr. Dunlop's letter quoted above and authorized him to issue a proclamation surrendering all claims to teak or other valuable wood beyond the limits of the three forests of Bánd, Tudil and Vinhere in Suvarndurg *táluka* and Mahán near Málvan. Translations of the proclamation actually issued will be found in the Government Précis (Volume IV., page 3,) and in paragraph 16 of Mr. Jardine's judgment printed at page 407 of Volume II. As the measure failed to secure the object intended, namely, the growth of useful timber, Government rescinded the proclamation by another proclamation[1] dated 19th June 1851, and "resumed in regard to forests in the above-mentioned three *tálukás*, all the seigniorial rights which it possessed previous to 1823." But in the case noted in the margin it was held by the High Court "that Government cannot, by issuing a subsequent proclamation resume a grant made by a previous proclamation, inasmuch as it cannot, any more than a private person, without the consent of the donee, revoke a gift actually made."

Venkatráv Surve
vs.
Collector of Ratnágiri.

The scope of Mr. Dunlop's proclamation has been the subject of much contention. The two leading cases on the subject are those known as the Pigonde case and Surve's case, in both of which it was held that unless a *khot* was proved to be the *proprietor* of his land, the proclamation neither conferred upon, nor confirmed to him, any rights in the timber trees.

7. In 1831 the Collector in answer to a reference from Government wrote a report (No. 412 of 31st October 1831, *vide* Volume IV, page 202) on the subject of the Government teak forests in the Konkan. From this report it appears that there were then four preserved forests in the Konkan, *i.e.*, at Salsette (Thána), Tudil (Kolába) and Málvan and Suvarndurg (Ratnágiri). As regards the trees beyond the preserves the Collector remarked that, 'throughout Salsette and also in most parts of the Southern Konkan, all teak trees, wherever growing, were considered the property of the State. The prohibition against cutting them in the Southern Konkan was removed (with the exception of the reserves of Málvan, Savarndurg and Tudil) and Government gave up to the rayats all claims it might have on those trees.' In Salsette, however, the prohibition has been retained, and Government still possesses a right to all teak trees except in villages which have been made over to proprietors. As regards the future the Collector recommended that the Salsette reserve should be kept up under the supervision of a reduced establishment for ten or twelve years more and that the privilege of cutting the timber from the other three preserves should be farmed for a period of four years. He felt no doubt that from ten to twelve thousand rupees might be realised by Government during the term. In regard to the trees in Salsette beyond the preserve, and in villages still retained in the

[1] The Pendse case, page 204.

hands of Government, he suggested that the trees then fit for timber and rafters should be disposed of by sale and the prohibition against the villagers cutting teak be removed. Government in their No. 2976, dated 16th November 1831, acknowledged the receipt of the Collector's letter respecting the teak forests in the Konkan belonging to Government and informed him that the Right Honorable the Governor in Council concurred in his suggestions relative thereto and authorized their adoption accordingly. It does not however appear from the records that the teak trees beyond the preserve in Salsette were disposed of as proposed or that the prohibition against the villagers cutting teak was removed.

8. There was one other important item of revenue from the public forests of the district up to 1838, which must be noticed here. We refer to the tax on timber and firewood removed from the jungles which was collected by the Land Customs Establishment and was variously known as 'Kolai,' 'Tijái,' 'Ránkhanda,' 'Wunnee,' 'Sherista,' or 'Kabarmakta.' In some cases where this levy was made in addition to the ordinary customs, it was evidently a tax pure and simple for the privilege of cutting wood in the forest. In other cases where it was merged in the Customs duties the latter were deliberately imposed at a very high rate, so as to include seigniorage for the privilege of felling Government wood as well as the duty on export. The annual revenue from this tax cannot be ascertained, but that the receipts from this source came to a considerable sum may be gathered from the official correspondence of that time. It appears that the rate of tax varied at first from 33 to 37 per cent. *ad valorem*. In the first years of the British Rule the tax was farmed. It is stated that although the authorised rate was *tijái* or one-third, the successive farmers never, owing to a well founded apprehension of ruining the timber trade, attempted to collect so high a duty. The farm however always realised from 4 to 10 thousand rupees per annum. In 1837, on a representation from the Assistant Collector of Customs, the tax when transferred to the management of the department was reduced to about 20 per cent. On the introduction of Act I. of 1838, which directed the abolition of transit and inland customs duties, the wood tax, wherever it had merged in the customs, was abolished altogether in the inland parts, and was reduced at all places of export by sea to 3 per cent. *ad valorem*, which was the reduced tariff rate of export duty under the Act. But where it had hitherto been levied in addition to the customs, it was allowed to be retained as 'being the only means through which the Government forests were made to contribute to the revenues.'

Tax on timber levied by the Land Customs Department.

9. This change however only aggravated the inequalities in the incidence of the taxation. In 1840 Mr. Young, the Deputy Collector of Customs, drew the attention of the Collector to this anomaly and recommended the re-imposition of the wood tax at a uniform rate. The following extracts from Mr. Young's report show the state of this tax at the time, and his proposals for placing it on a reformed basis:—

"*5th.*—Throughout the parts of *tálukás* Sanján, Salsette, Panvel, Sánkshi, Rájpuri and Ráygad wood of all descriptions is liable only to the customs duties of three per cent. *ad valorem*.

"*6th.*—In Manor *mahál, táluka* Bassein, firewood and all kinds of timber, excepting *hed, kalam* and teak pay only customs. The three kinds of timber above specified pay no customs, but a duty of twenty per cent. *ad valorem*, known by the name of *koláí*, and formerly levied at the rate of 33⅓ per cent.

"*7th.*—In Káman *mahál* the *koláí* described in the foregoing paragraph exists, and the wood not affected by this tax pays "Wunnee" at five per cent. *ad valorem* in addition to customs. The "Wunnee" has been reduced to the present rate from 25 per cent. which was formerly exacted.

"*8th.*—In Kalyán *táluka* at the port of Bhivandi 'Ránkhanda' and 'Wunnee' are levied in addition to the customs. The 'Wunnee' is levied at five per cent. *ad valorem* and affects firewood only. The 'Ránkhanda' is leviable on building timber and is assessed at various rates per cent., and at the port of Kalyán a tax called 'Sherista' is levied on building timber.

"*9th.*—In the Ratnágiri *zilla* there exists a monopoly called 'Kabarmakta' which is farmed out by the Collector of Land Revenue. The holder of this monopoly has the exclusive privilege of purchasing firewood from the wood cutters. Building timber throughout the Ratnágiri *zilla* pays, as far as I am aware, only the customs duties of three per cent.

"10*th*.—My object in making the above review has been partly to point out the great inequality of the present duties, but chiefly to show grounds for an opinion, which I beg to submit, that in abolishing the former rate of customs we in many instances sacrificed what was in reality a seigniorage leviable on wood cut from the Government forests, though it was levied by the sea customs farmers and had become to be included as an item of *jakát*. If such was the fact it becomes a question of much importance whether, from an obsequious reverence to mere names, we are to perpetrate the immense sacrifices which we have made even though, as seems not improbable, we should thus hasten the destruction of those forests whose deteriorated condition may soon be felt as a heavy calamity.

"11*th*.—In looking upon the former duties on wood as something more than mere customs notwithstanding the designations under which they were levied, it may be held that they are not abolished by Act I. of 1838. I would propose that duties should be assessed on wood to be levied in addition to the sea customs at all bunders of the Konkan. If these duties be fixed at five per cent. *ad valorem* for firewood and charcoal, 10 per cent. for inferior building timber, and 15 per cent. for teak, *hed* and *kalam*, we should in no instance exceed the former levies, and independent of the important collateral advantage of checking the destruction of our forests, we should realise an important additional revenue, raising the collections of this Department in the Sanján and Bassien *tálukás* (which have fallen from upwards of one lac of rupees to barely 45 thousand rupees) up to their former standard."

Although this unsatisfactory state of the wood tax was brought to the notice of Government, nothing appears to have been done to reform the tax until Dr. Gibson took up the matter again later on. After some correspondence Government in their letter No. 7202, dated 12th July 1851, sanctioned a scheme proposed by Dr. Gibson for the levy of fees throughout the Thána District. The old *koldi* tax was at the same time everywhere abolished.

Attention of Government first drawn to the destruction of forests in 1837.

10. The exhaustion of the forests due to irregular exploitation appears to have first attracted the attention of Government in 1837. In that year, in writing to the Revenue Commissioner on the subject of the *koldi* tax, Mr. Acting Secretary Townsend observed :—

"It is however probable that the great decrease of the forests in the North Konkan which has taken place since the English obtained possession of the country and which is yet progressing will be in course of time the most effectual check to the trade.

"The curved timbers and knees used in ships and large boats were obtained from the North Konkan, and realised a high price formerly; the Governor in Council would wish to know, whether such timber is still procurable in the Konkan; if not he conceives, it would be well to refer to the Collector of Thána to consider and propose measures which may restore and perpetuate the supply of this valuable and useful forest timber, particularly in those situations which command the readiest conveyance to the coast. You will accordingly be pleased to communicate with that officer on this subject and report the result to Government."

Prohibition against cutting teak in 1841.

11. After some correspondence on the subject between the Collector, the Revenue Commissioner and Government, which has been summarised in paragraph 4 of Précis, (*vide* Volume IV., page 3,) the first prohibitory order was issued by the Collector in 1841. The following is a translation of it :—

"The rayats of the said *táluka* (Kalyán) have been cutting down teak trees including even promising ones from the Government forests to such an extent as to altogether destroy them. To prevent this an order containing the following clauses, has been issued to you :—

"No one should on any account be allowed to cut without an order from Government any teak post, rafter, &c. The *pátil*, *faujdár*, *kárbhári* and *balutedárs* such as Mhárs, &c., should be enjoined to enforce this order. You also should keep an eye and carry out the Government order. Should any person, however, cut any teak tree, owing to want of proper management, the *vatan* of the person in whose village such cutting may have taken place will be attached and a stringent order issued. The usual annual cutting of the *injáili* trees other than teak trees should not be prohibited. If timber trees be cut beforehand you should act according to the Circular Order No. 139 of 1839.

"2. Should there be any cut teak wood lying at present, orders should be issued for its removal during the current year. Otherwise attempt will be made to remove wood now cut under pretence of its having been felled before. You should see to this.

"3. The order contained in these two clauses should be acted upon. You should also make proper enquiries and carry out the orders. You will fully bear in mind that no departure therefrom will be tolerated. Dated *Chandra* 24th Zille Suma Jhide Arbain Mayatain-wa-alaf, Mágh *vad* 12th Shake 1762, 17th February 1841 A.D."

12. It will be observed that the prohibition sought to be enforced by this circular order had for its object the prevention of reckless cutting *from the*

Government forests, which included in those days all the tree-covered waste land of which parts were used from time to time by the people for sporadic cultivation, pasture and *rób* supply. The subsequent correspondence which took place between the Collector and the Government on the petitions of individuals has been summarised in the Government Prècis and in Mr. Jervoise's memorandum in the Pendse case. It shows that Government intended the prohibitory orders to apply to all the Government forests including the *varkas* lands, over which the people had certain rights of user.

Administration of the forests by Dr. Gibson.

13. In 1840 Dr. Gibson was deputed on a tour of inspection to examine the northern forests of the Presidency, and to report on their condition and capabilities. In 1841 this officer submitted his report to Government through the Revenue Commissioner on certain forest tracts near the coast in the Northern and a part of the Southern Konkan. In 1842, he undertook an experimental felling in the Anjarla *mahál* of the Suvarndurg *táluka* of the Ratnágiri District (*vide* paragraph 14 of Government Resolution No. 3922, dated 28th October 1862).

The information which had been collected by Dr. Gibson in his tours, and the results of the experimental thinning of the forests above referred to, were such as to induce the Government of the day to take into consideration the propriety of permanently appointing an officer for the general conservancy of the forests, whose duty should be to enforce a regulated system for felling timber, and to consider the means for preventing a decrease in the supply of firewood and building timber throughout the Presidency.

14. Accordingly Dr. Gibson was appointed *ad interim* Conservator in 1845 and Conservator in 1847, with the sanction of the Government of India. The Military Board under whose orders the Forest Department was placed were requested to draw up rules for the guidance of the new department; but these rules appear never to have been submitted, and Dr. Gibson seems to have been left to exercise his own judgment and discretion in giving effect to the objects Government had in view in making his appointment. A full account of the aims of the department and of the system and rules adopted to carry them out between 1847 and 1862, will be found at pages 82 to 114 of the Hand-book to the Forests of the Bombay Presidency, by Dr. Gibson, published by Government in 1863.

Early demarcation.

15. The Revenue Commissioner as early as in 1840 had suggested that the forests in the Konkan should be demarcated. Dr. Gibson appears to have attempted to demarcate village reserves in the Northern Konkan in 1845-46, as far as it was possible to do so in the absence of any survey of the country. In his report for 1856-57, (paragraph 78, page 13,) Dr. Gibson states:—

"Mr. Law, when Collector of Thána, had, in concert with me (in 1845 or 1846) assigned to each village a timber reserve proportioned to the size of the village bounds, and it was ordered that this reserve, as well as the timber growing in what is called the *sindáree* grounds of the rayats, that is, ground wherein grow the trees or bushes from whence the material is cut for burning in the adjacent fields, should be carefully preserved for village use."

What the precise conditions of this demarcation were, cannot now be ascertained, except that nine kinds of trees including teak were ordered to be reserved in the areas in question. Nor is any trace left to indicate the boundaries of these old reserves. Probably they were included in the lands described as *ránrakshan* at the Survey. From the description of the work given by the *mámlatdár* of Shahápur, (Thána Witness No. 18, page 42, Volume II.,) and in the concluding part of paragraph 5 of the Government Prècis, this demarcation appears to have been a very loose assignment of a small part of the waste lands of each village for the growth of timber mainly to supply local wants.

First forest establishment.

16. Dr. Gibson exercised his control and supervision over all lands capable of forest growth or actually containing any forest. He was at first allowed only a few foresters to guard the important forests, the Subordinate Revenue officers being directed to assist him in the work of conservancy.

Protection of forests by heads of villages under the share system.

17. In the Southern *tálukás* of Thána which now form part of Kolába, where the villages are mostly held on the *khoti* tenure Dr. Gibson introduced what is known as the share system. Under this the *khots* or other heads of villages entered into an agreement with the Forest Department to conserve the teak

forests of their villages on consideration of being allowed to lop the trees for *ráb*, and to take one-third or one-fourth of the net proceeds of the periodical fellings. Later on when the Revenue Survey was introduced into these villages, the Survey Department entered into similar contracts with the *khots* at the time of the settlement. The exact terms of these agreements will be seen from Exhibits 16 to 19 of the Kolába Evidence (Volume II., pages 243 to 245). Mr. Keyser has also placed in our hands an exhaustive report by Mr. Hamilton on the subject of these agreements. We have thought it unnecessary to print this document as one of the appendices, as it relates for the most part to the claims of the *khots* which have been expressly excluded from the scope of our inquiry. We understand that by Government Resolution No. 7863, dated 4th October 1884, paragraph 5, quoted by Mr. Sinclair (*vide* page 290 of Volume II), the Conservator of Forests is vested with discretionary power to renew these *kabuláyats* with the heirs of the original executors or not, as may seem best.

18. The main sources of forest revenue in Thána and Kolába in Dr. Gibson's time appear to have been the thinnings of the teak reserves and the collections under the fee system which, as explained above, took the place of the *kolái* or *van* tax. Dr. Gibson, writing in 1856, alludes to the system as follows (paragraph 144, page 99 of the Hand-book to the Forests of the Bombay Presidency) :—

Forest revenue under the fee system

"In 1850 the duties of the Conservator were considerably enlarged by reason of the Government having devolved on him the organisation of a scale of fees on jungle timber.

"It is here necessary to explain that on the abolition of the transit duties in 1836, a number of levies which had been previous to that time made on forest, and which were really a seigniorage and had nothing to do with the transit duties except that they had been levied by the same establishment, were by mistake abolished and for some years a correspondence had passed through different offices as to the most eligible mode in which they could be re-imposed."

The Conservator suggested—

"That the best plan seemed to be to impose them in such form as might be agreed on and that the representations of parties affected by them would soon serve to indicate where inequalities existed.

"This was accordingly done and the fee system, as settled in January 1852, has since worked satisfactorily, producing a revenue of from Rs. 32,000 to 35,000 *per annum*. During the year 1856-57 the farm of the fees has risen to upwards of Rs. 66,000 per annum."

19. The fee system appears to have met with strong local opposition at its introduction. In one of his Administration Reports Dr. Gibson alludes to it as follows (*vide* Forest Administration Reports, 1856-57 to 1859-60, page 14) :—

"Of such clamour we had an example in 1851, when the Gujarát merchants and others in the Sanján *táluka* shipped about 300 of the Várli tribe for Bombay, and marshalled them on the steps of the Council room in order to concuss (coerce?) the Government into a repeal of the jungle-fee scheme which had just then come into operation, and when I proceeded to Sanján in January 1852, in order to make a final settlement, I was surrounded by some thousands of persons, all of them with the same object, and little disposed to stop short even of personal violence.

"For these reasons I suggested that the measure must be carefully weighed before any active proceedings are entered on in regard to it."

20. The conditions of the farm of the right to levy the fees, as eventually settled for the Konkan districts, are given in Exhibits 78 and 79 printed at pages 166 to 170 of Volume II. From the 4th paragraph of these exhibits and paragraph 8 of the Government Précis, it appears that all forest material required for local consumption was virtually exempted from the payment of the fees and that the latter were almost exclusively levied on wood removed from the forests for trade purposes. These exemptions in favour of the local population no doubt satisfied all reasonable claims, and prevented further opposition to the system.

21. The result of the farming of the fee system was not however so satisfactory as Dr. Gibson seems to have thought in 1856. This will be seen clearly from the subjoined extracts from Government Resolution No. 3922, dated 28th October 1862 :—

"The system adopted with regard to the collection of these fees was generally speaking to farm the right to collect them except in lesser divisions, and in particular localities where the collections were made under direct management by an establishment of *kárkuns* and peons who were posted at the various points through which the timber and other forest produce had to pass.

"16. In the Thána Collectorate and elsewhere, wherever the right to collect the fees was farmed, no such assistance (of additional establishment) could be given to the few peons and foresters employed to watch the forests, and the general result of this lax system has been most serious on the forest resources, it being the general complaint everywhere that all valuable timber has nearly disappeared and that the supplies of firewood and other timber are being rapidly cleared away.

"17. Owing to the growing scarcity of timber and the extensive demand for wood of all descriptions for building and railway purposes, prices have within the last few years so risen as to hold out immense temptations to every one permitted to fell timber, or to enter the forests, to turn their opportunity to the best account. Not only is timber clandestinely removed from the forests, but the felling is conducted in the most reckless and wasteful manner, and to such an extent has the devastating process been carried that serious apprehensions are entertained that if the forests are not more strictly conserved than they have hitherto been, and the Conservator's Department placed on an efficient footing to cope with the evil, the supplies of timber will fail altogether"

22. Previous to this Government in 1860 directed the abolition of the practice of farming the levy of fees, and authorized in its place a system of direct collections by the agency of the forest subordinates. In the Resolution of 1862 above quoted, the fee system was finally condemned for the reasons stated, and it was directed that in future all fellings to supply the trade should be carried out departmentally.

Regulations as regards forest privileges from 1847 to 1862. Action taken to induce people to plant trees.

23. Our attention has been drawn to several orders issued between 1847 and 1862 with the object of encouraging the people to plant trees, and of preventing the destruction of timber and firewood reserves by reckless lopping of trees for *ráb*. We will note the most important of these orders.

The circular of the Military Board holding out inducements to people to plant trees in waste and occupied lands will be referred to again in Chapter VII.

In his circular of the 12th August 1847 the Collector allowed the lopping of trees in *shindád* lands for *táhál* but forbade the cutting of promising or full grown timber trees.

In 1849 a general proclamation was issued to the effect that the people might cut trees other than teak and blackwood for agricultural purposes (*vide* Bassein Mámlatdár's statement at page 120 of Volume II).

In 1852 lopping of teak for *táhál* was prohibited for the first time.

In 1853 a circular order was issued directing that in lopping *ain*, *khair* and ten other specified kinds of trees, the most promising shoots should be left uninjured.

In 1858 a similar order was issued forbidding people from pollarding or felling trees in their *shindád* lands.

In 1859 (*vide* Exhibit No. 56, page 152 of Volume II.) the Collector issued a circular in substitution of a former one on the same subject. By this new circular the *rayats* were allowed to lop branches of trees other than teak and blackwood and to cut shrubs, &c., on *ráb* lands. Side branches of teak and blackwood trees were ordered not to be cut except under the guidance of the peons of the Forest Department.

24. In 1862 the forest establishments in Thána and Kolába were revised and strengthened, and placed under the immediate charge of separate officers. The stricter conservancy which resulted from this step led, as shown in the Précis, to numerous complaints both on the part of local residents and merchants supplying the Bombay market with fuel. In 1863 the whole forest question in Thána was referred for inquiry to a committee. The results of the work of this committee, and of all measures subsequently taken for the protection of the forests of the North Konkan, will be duly noticed later on in examining the claims of the local residents under each separate head of our inquiry.

CHAPTER IV.

ARRANGEMENTS FOR LOCAL SUPPLY.

SECTION I.

Grazing.

Chapter IV
SECTION I.
GRAZING.
Ante-Survey period.
Kurans.

1. Up to the time of the introduction of the Survey Settlement into the North Konkan districts no attempt appears to have been made either by the British Government or its predecessors to define any particular areas of waste lands within which the cattle belonging to the inhabitants should be allowed free grazing.

2. The Revenue Commissioner in 1844, in submitting his report, as to the practice regarding the provision of grazing for cattle in different districts of what was then the Southern Division of the Presidency, has stated[1]: "under former Governments certain portions of land would appear to have been set apart for the village cattle, but it is not to be deduced from the existing village records that such appropriations were general, or that they were made upon any fixed principle." As far however as the Konkan districts are concerned there is nothing in the evidence before us to warrant the inference that any such allotments of land for the village cattle were made or recognized under former Governments. It may therefore be assumed, as contended by the Memorialists, that the herds of the villagers had the free run of all lands not at any given time appropriated for cultivation or other purposes, or reserved as Government *kurans*, *i.e.*, valuable pastures in which the right of grazing or cutting grass is, according to long established custom, farmed by the State.

3. As a general rule only lands which yield a superior quality of grass have been reserved as *kurans* and excluded from the area available for cultivation. In the villages of the Deccan plains much valuable land of this description has been so reserved from ancient times. In the Konkan, although coarse grass grows abundantly throughout the tract, there are very few *kurans* as understood in the Deccan, and the few there are owe their value more to their proximity to the populous city of Bombay than to the quality of their grass. Writing in 1841 the Revenue Commissioner observed[2]: "Owing to the abundance of forage in the Thána Collectorate no revenue appears to have been derived from the farm of the grass lands in any but a few spots in the immediate vicinity of Bombay."

4. As the area under cultivation was more or less in any given year so must the area available to the local population for free pasturage have varied. Except perhaps in Salsette there can practically have been no other limit to free grazing than that imposed by cultivation.

5. On the other hand there is good reason to suppose that wherever practicable the Marátha Government, in accordance with its usual custom, levied tolls or fees on strangers who sent cattle from other districts to graze in the Konkan. *Vancharái*, or the levy of fees on cattle for grazing, was a recognized mode of raising revenue from non-resident cattle-owners and professional graziers. As regards Salsette special allusion to this tax is made in Regulation I. of 1808, which gives in detail the revenue history of that island. Section IX. describes the new taxes introduced by the Maráthás shortly after the conquest of Salsette from the Portuguese, in 1737, to compensate for the loss caused by the desertion of the inhabitants. Amongst these new levies are mentioned "*van charray*", or fee for the grazing of cattle; *bussum penda* and *gavatt*, or duty on the export of straw and hay; *poin gavatt*, *i.e.*, the rent of hay grounds let out to the highest bidder, &c. Salsette became British territory in 1774. The decline in the prosperity of the island owing to revolutions, desertion of inhabitants, excessive taxation, injudicious farming of lands to the highest bidders and other causes, necessitated radical changes in the revenue system. Under the recommendations which were approved in 1797, many of the old taxes were abolished. Amongst those then retained, however, were

[1] Précis of Correspondence, Volume IV., page 5.

[2] No. 377 of 23rd March 1841, *vide* paragraph 5 of Précis (Volume IV., page 4).

(*vide* clause 5 of Section XXX.) *vancharray* or pasturage and *poin gavatt* or hay tax. Subsequently in 1805 the *vancharray* was abolished for special reasons in Salsette as appears from Section LIV. "It was found," we there read, "to consist in a toll collected at the rate of half a rupee on every unhired bullock, he or she buffaloes or horses, and of twenty-eight reas (of which four hundred make a rupee) on every hired bullock, &c., sent across from Bombay to graze in the divisions of Bándra and Kurla." These restrictions "appearing to militate against the spirit of the system for the establishment of a free intercourse between the islands" were consequently removed. *Poin gavatt*, however, or the letting of grass lands (*kurans*) to the highest bidder remained a part of the system in Salsette as elsewhere.

Professional graziers.

6. We may assume that all persons bringing cattle from other districts were liable to pay *vancharái* fees, wherever these were in force. Professional graziers residing in the district in addition to paying *vancharái* fees were subjected to a further levy under the name of (*toop*), a duty (*vide* Section XV.) "of from six to eight rupees on each maund of ghee brought down for sale by the milk-men who live in the hills." '*Toop*' was one of the recognized taxes everywhere under the Marátha Government and was one of those specially retained in 1797.

7. Beyond the facts above stated there is nothing in evidence before the Commission to show how the grazing privileges of the inhabitants were regulated up to the time of the introduction of the Survey.

Recapitulation.

To sum up, we know that certain pasture lands (*kurans*) were from ancient times reserved by the State and farmed to the highest bidders; that waste lands which would otherwise have been available for grazing were from time to time, according to demand, assigned or appropriated for cultivation, whether permanent or temporary; that non-resident cattle owners and professional graziers, whether settled or nomadic in their habits, were, as a rule, liable to pay for pasturage (*vancharái*); that a duty was levied on the export of hay from the district (*bussum gavatt*); and that a tax was imposed on the sale of clarified butter (*toop*). We infer also from the absence of any evidence to the contrary that the agricultural population had, previous to the Survey, the free use for grazing purposes of all unappropriated and unreserved waste lands, and that whatever arrangements they may have made *inter se* for the exercise of this privilege or user were dictated solely by local custom and convenience, and carried out without interference by the State.

Assignments of waste lands for grazing at the Survey.

8. We have next to consider how former usage as regards grazing in the Konkan districts was affected by the operations of the Revenue Survey between 1854 and 1876. The Settlement Reports of the different *tálukás* make no special mention of the assignment of lands for grazing or other purposes, such assignments being always considered as subsidiary arrangements to be carried out at or after the announcement of the rates by the Settlement Officer. The survey records, however, show in detail how the waste lands of each village were then treated and the uses to which they were assigned. The various remarks in the village registers specifying the uses to which such lands are to be applied are quoted in the evidence given by the *mámlatdárs* of the different *tálukás*. These remarks present an extraordinary variety of expression in the words used to convey apparently identical meanings, which can only be accounted for on the presumption that the entries were made at different times by different writers without previous consultation, and with little or no idea as to the importance which might in after-years be attached to minute verbal distinctions.

9. Setting aside minor differences we find some waste lands set apart exclusively for forests; some for forests and grazing combined, the grazing being in most cases declared free and in a few cases available only on payment; some for free grazing alone; some for sale of pasturage or grass; and others for no specified purpose.

Lands set apart for forests exclusively.

The lands set apart for Government forests exclusively are described as *sarkári rán* or *ránrakshanákade*, literally, "for preservation of forest." The area coming under this category is comparatively small. It includes the Imperial

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SECTION I.

GRAZING.

forests demarcated either at the time of the Survey or subsequently by officers appointed to carry out the recommendations of the Forest Committee of 1863.

Assignment of lands for forest and grazing combined.

10. A very large area of land, however, was assigned for forests and grazing combined, the forest to be protected being declared to consist either of teak alone or of trees generally, *e.g.*, "*rán rakshan* or *ságrakshan karun gure mophat chárávi*," *i.e.*, "cattle to be grazed free, preserving the 'forest' or the 'teak'." In some instances similar entries have been made omitting the word "*mophat*", meaning "free." In others it is expressly stated that the grazing is to be sold, *e.g.*, "*ságván kherij karun vancharáicha leláv karáva*", *i.e.*, "reserving the teak the grazing to be sold by auction." There is yet another class of lands in which grazing and forest conservancy go together, *viz.*, the areas set apart at or shortly after the Survey as village forests. These forest lands are described as "*gávbhág*" or "*gávche rán*" as distinguished from Imperial reserves. Grazing is not always referred to in the remarks made opposite lands so described in the registers. As it was well understood by all concerned that one of the chief objects of setting apart lands as village reserves was to provide free grazing for the village cattle, it was probably considered unnecessary to mention the fact.

Assignment of lands for grazing only.

11. Other lands again were set apart for grazing exclusively without any directions as to the preservation of the tree-growth thereon. Those lands in which the grazing was to be disposed of by auction or by levy of fees are described variously, as "*vancharái*", meaning literally "forest grazing", but always understood as land in which the grazing is to be sold; "*bin khapácha darsál gavtáche leláv karáve*," *i.e.*, "unappropriated land, the grass to be annually sold by auction"; "*kuran*" (in Salsette only), *i.e.*, "pasture land"; &c., &c. When lands have been assigned for free grazing exclusively, the entries in the register show a similar variety of expression. Sometimes the word "*gurcharan*" is used alone, meaning literally cattle grazing, but implying like its synonym in the Deccan, *gáirán*, that the pasturage is *free* for the village cattle. In other cases the word "*mophat*", *i.e.* "free", is specially introduced, *e. g.*, "*gure mophat chárávi*," *i.e.*, "cattle to be grazed free"; *gurcharanis mophat dila áhe*, *i.e.*, "given for free grazing"; &c., &c. Marsh lands as well as hills have in many instances been assigned for grazing—the word "*mophat*" or free being sometimes entered and sometimes omitted—, as well as for standing grounds for cattle, *e.g.*, "*khájan pánthal yánt gure chárávi*," *i.e.*, "marsh or boggy land, cattle to be grazed in it; "*khájanákade, yánt gure mophat phirávi*", *i.e.*, "marsh land, cattle to roam *free* in it"; "*khájanáchi jága aslyás gure phiráyás rahávi, varkasáchi asel tar gure mophat chárávi*," *i.e.*, "if marsh land, for cattle to roam in, if *varkas* (upland) cattle to graze free."

Waste lands not specially assigned for grazing or other purposes.

12. The remaining waste lands which are not set apart either for forest or grazing or for standing grounds for cattle, are described variously as "*khájan*," *i.e.*, "marsh land"; "*oshik binákári*," *i.e.*, "unassessed waste"; "*parigh*", *i.e.*, "unoccupied waste"; &c., &c. In the Deccan and Southern Marátha districts the grazing of all unassessed waste lands not specially described as "*gáirán*" and thus set apart for free grazing is in accordance with the rules on the subject sold by auction to the highest bidder whether the registers contain a direction to do so or not. In Thána, however, as we learn from the *mámlatdárs*' evidence, the practice has always been from the introduction of the Survey up to the present time *not* to sell the grazing of any unassessed waste lands not taken up for Imperial forests unless the register contains a special injunction to that effect or unless the land is described as "*kuran*" or "*vancharái*," &c., terms implying that it is customary to sell the grass or grazing. The only probable explanation of this difference in practice that occurs to us is that owing to the abundance of forage available in Thána, both in the hill lands allotted for cultivation and to provide ash manure for rice fields, and in the extensive areas assigned for free grazing, the pasturage of the remaining waste area was found to be practically unsaleable.

13. It has been noted above as regards the lands assigned for grazing in Thána, whether exclusively or in combination with forest conservancy, that in some instances the word '*mophat*,' 'free', is inserted, while in others it is omitted. It has been contended that the entry of this word in some cases implies that its omission

Construction to be placed on certain words used in survey records assigning lands for grazing.

in other cases was *intentional*: or in other words that while *free* grazing was promised in certain lands, grazing only was guaranteed as regarding other similar lands, without any promise that it should be enjoyed free. Taking into consideration the manner in which these entries have evidently been made, we cannot believe that the Survey officers intended that there should be any distinction whatever between the lands described as '*gurcharnikade*' or '*gure chárávi*', and others similar in all respects described as '*gurcharnikade mophat*' and '*gure mophat chárávi*.' Where it was customary that the grazing should be sold, and it was intended that that custom should be continued, the land is either called '*kuran*' or '*vanchardi*', with or without additional words referring to disposal by auction, or else without being described as '*kuran*' or '*vancharái*', an express direction is given to sell the grazing by auction. The word '*gurcharan*' like the word '*gáirán*' clearly refers to *free* grazing only, and is always understood in this sense. In the Government Resolution on grazing, No. 7467 of 15th September 1885, '*gáirán*' is used thus as denoting *free* grazing land. Where the word '*gáirán*' or its exact equivalent '*gurcharan*' is used the addition of any word such as '*mophat*' signifying 'gratis' is redundant and unnecessary and its omission is of no importance. Thus '*gurcharan*' and '*gurcharnikade mophat*', as used in the survey registers, are expressions of precisely similar import. Nor do we consider that even where the particular word '*gurcharan*' is not used that any distinction was meant to be made between lands assigned respectively for grazing under the entries *gure chárávi* and *gure mophat chárávi*, because we believe, as above stated, that where it was intended to sell the grass or grazing of any land either an express direction was given to do so, or else the land was described as '*kuran*' or '*vancharái*', terms clearly implying such intention.

The use of the free pasture land of one village by the residents of other villages authorised in exceptional cases, not as a rule.

14. We have stated our conclusion that previous to the Survey all unappropriated and unreserved waste lands were used by the people for free grazing. In lieu of these undefined and shifting areas liable at all times to be encroached on by cultivation the Survey assigned wherever available special areas in each village for free grazing for the cattle of that village, no portion of which free grazing area could be appropriated for cultivation or other purposes inconsistent with the object of the assignment without the special sanction of the Revenue Commissioner. In making such special assignments the Survey officers no doubt gave due consideration to existing village customs. It is important, however, to note, with reference to the claims of the inhabitants generally, that, except in a few special cases, the Survey officers have made no provision for the free grazing of the cattle of any one village beyond the boundaries of that village. In three or four instances which have been brought to our notice, the survey papers expressly state that a particular block of free pasture land is open to the cattle of one or more neighbouring villages. Where, however, this arrangement has been made it is usually found that the village in which the assignment has been made has no resident population, its fields being cultivated by persons residing in the neighbouring village or villages for whose use the free grazing lands are set apart.

15. In some cases also where the survey allotments for free grazing proved insufficient for the villages for whose use they were assigned, additional lands were given for grazing on nominal assessment, the land being entered in the name of some leading man on behalf of the village. We learn from paragraph 27 of Mr. Loch's report No. 1713 of 31st March 1885 that those additional assignments were made chiefly in Panvel and Kalyán.

Vide Volume IV., page 67.

Curtailment of free grazing areas by inclusion in Imperial reserves in the Forest demarcation effected between the introduction of the Survey and the passing of the Forest Act.

16. The proportion which the total area assigned in the Thána District for free grazing at the Survey bears to the total waste area cannot be accurately ascertained, although we know it must have been very large. The reason for this is that in the course of the demarcation of forest lands, which was carried on from time to time between the introduction of the Survey and the passing of the Forest Act of 1878, certain areas of land assigned for free grazing at the Survey were included together with other unassigned waste lands in Imperial reserves, and removed from the list of free grazing lands. In such cases fresh pages giving effect to the changes have been substituted for the old ones in the survey *suds* or registers, and no record of the purpose to which such lands were originally applied remains. When free grazing lands were converted into village forests by the demarcating officer, the area available for free pasturage was in no way

curtailed. But whatever area out of lands formerly assigned for free grazing, either exclusively or in combination with forest conservancy was included in Imperial reserves, remained free grazing land no longer, the grazing of the Imperial reserves being sold by auction by the Collectors' orders from and after 1871. We conclude, however, that the area thus absorbed was too small to cause inconvenience or provoke complaint, for we cannot find anything in the memorials or in the witnesses' statements to show that the demarcation of forests effected prior to the passing of the Forest Act was looked upon at the time, or is now considered, as a grievance. The general tenor of the evidence leads us to think on the contrary that these arrangements were cheerfully acquiesced in by the inhabitants.

Inclusion of lands assigned for free grazing at the Survey in the Reserved and Protected forests constituted under Act VII. of 1878.

17. We have next to consider the action taken in 1879 as regards the inclusion of waste lands in Reserved and Protected forests consequent on the passing of the Forest Act and how the arrangements for free grazing made at the Survey were thereby affected. The following statement has been compiled from detailed lists furnished by the Forest Settlement Officer of Thána :—

No.	TALUKA.	CATTLE.			GRAZING AREA IN ACRES OF			FOREST AREA IN ACRES TAKEN FROM THE GRAZING AREA OF FOREST VILLAGES					REMARKS
		Agricultural.	Non-agricultural.	Total.	Forest Villages.	Non-Forest Villages.	Total.	Reserved Forest under Section 9.	Reserved Forest under Section 34.	Protected Forest under Section 34.	Protected Forest under Section 28.	Total.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Bhivandi	26,683	1,565	28,248	26,331	12,887	39,218	12,225	125	6,151	507	19,008	
2	Shahápur excluding the Mokháda *peta*.	32,338	946	33,284	1,30,330	26,056	1,56,392	..	1,002	114,051	.	1,15,053	
3	Kalyán	29,759	84	29,843	13,436	22,898	36,334	..	..	4,242	1,990	6,232	
4	Dahánu	43,228	266	43,494	88,132	2,938	91,070	..	3,346	80,005	..	84,251	
5	Murbád	45,113	..	45,113	43,794	21,025	64,819	..	..	43,791	..	43,791	
6	Bassein	19,730	799	20,538	5,403	14,035	19,438	..	..	1,511	..	1,511	
7	Váda	16,850	51	16,901	45,259	19,512	64,771	..	3,891	18,155	..	22,046	
8	Karjat	24,831	9,408	34,239	3,862	30,373	34,235	803	.	2,268	103	3,229	
9	Salsette	21,472	172	21,644	9,720	5,283	15,003	3,337	349	329	..	4,015	
10	Máhim	30,623	2,113	32,736	1,06,517	32,688	1,39,205	..	21,049	81,381	.	1,02,430	
	Total ..	290,636	15,404	3,00,040	4,72,790	1,87,695	6,60,485	16,425	29,761	3,52,779	2,600	4,01,566	

18. We find from the above that the total area of land assigned for free grazing at the Survey, whether exclusively or in combination with forest conservancy in the ten *tálukás* which now form the Thána Collectorate, exclusive of the Mokháda *peta*, was 660,485 acres. Of this total area 472,790 acres belong to villages which have contributed lands to the Reserved and Protected forests as now constituted under Act VII. of 1878, and the remainder 187,695 acres to other villages. Out of the 472,790 acres included in forest villages 401,566 acres or nearly 85 per cent. have been notified as Reserved and Protected forests under Sections 34,19, and 28 of the Act, leaving 71,224 acres only outside forest boundaries. In framing the lists of lands which were notified as forests in the *Gazette* of 6th March 1879, those lands wihch had been previously demarcated or set apart as Imperial and village reserves were included in 'Reserved' forests, while all other available waste areas were, we understand, provisionally constituted Protected forests, leaving the question of their retention as Protected forests or their conversion into Reserved forests or their exclusion from forest limits to be determined subsequently after the further necessary inspection and inquiry.

19. The area of the free grazing land thus included in forests of [illegible] or other description, *viz.*, 401,566 acres, amounts to about 50 per cent. of the total forest area of the district. In the re-distributions which have since been effected and are still being made as a result of the inquiries and recommendations of the Forest Settlement and Demarcation Officers, more or less of this land has been or will be excluded from forests on account of its being isolated or useless for purposes of forest conservancy, or because its retention as forest will be inconvenient to the villagers. But we may assume that when the final demarcation of all the *tálukás* has been effected on the principles hitherto adopted, the total area of what was formerly assigned for free grazing at the Survey, which will be retained as Reserved or Protected forest, will not fall far short of four lacs of acres.

20. The enjoyment of the free grazing of the lands, *viz.*, 187,695 acres belonging to villages which have not contributed any land to forests and of the

lands disforested since 1879, has, of course, been in no way limited by the operation of the rules and executive orders for the management of similar lands included in forests. We must now examine the various orders passed since 1879 to regulate the uses of the free grazing areas which it was decided to retain as Reserved or Protected forests, after final settlement and demarcation in the Thána and Kolába districts.

Orders regulating grazing in forest passed on settlement reports, &c., between 1879 and 1886.
Táluka Alibág.

21. The first orders regarding free grazing in forests which we have to note are those contained in Government Resolution No. 1203 of the 14th February 1883 dealing with the report of Forest Settlement Officer of Kolába on the Alibág *táluka*. By these orders the permanent residents of forest villages, that is, villages whose lands have been taken for inclusion in forest, are allowed "to graze their cattle free in the unclosed portion of the forest blocks in which are incorporated the forest lands of their villages." They may also cut grass for their own use from the unclosed forests and from the closed forests also should the Forest authorities see no objection. Dhangars, a class of professional graziers, are also allowed free grazing in the unclosed forest for cattle *bonâ fide* their own property, if residents of a forest village. Other professional graziers and residents of villages which do not contribute land to any forest block, are allowed to graze their cattle in unclosed forests on payment of certain prescribed fees and not otherwise, due arrangements being made for giving grazing tickets to such persons as require them. The area of the forest which may be closed at any one time in this *táluka* is fixed by the same Resolution at one-half in the case of the Kankeshvar block and one-fourth in the other blocks.

Vide Volume IV., page 143.

22. The chief points to note about these orders are, that instead of giving free grazing to resident forest villages in the particular areas previously assigned for this purpose, the unclosed forest areas, whether more or less than the areas of old free grazing land included in the forests, are declared available for free grazing; that the concession is not limited to the unclosed forest contained within the boundaries of the village in which the concessionaries reside, but extends to the open portions of the entire forest block; that the privilege is given to the residents of a forest village provided any land from that village has been included in forests, whether such lands form part or not of what was previously assigned for free grazing at the Survey. On the other hand persons who reside in a village which does not contribute land to a forest block but who cultivate land in a village which does, are denied the privilege of free grazing in forests.

Panvel *Táluka*.

23. In dealing with the Forest Settlement of the Panvel *táluka*, then forming part of the Thána Collectorate, Government in their Resolution No. 7579 of 10th October 1883, repeated the same orders, the only modification being as regards Dhangars. Professional graziers of this class resident in a forest village are allowed under the Panvel orders to graze their cattle free in the unclosed forests if they hold land assessed at Rs. 20 per annum and upwards, and if they hold no land at all or land bearing less than Rs. 20 annual assessment, have to pay fees. It is not, however, stated whether this rule regarding Dhangars is to be of general application, or to be aplied in the Panvel *táluka* only. The wild tribes have also under this Resolution the privilege of cutting and removing grass for sale from the forests free of charge.

Vide Volume IV., page 146.

Sálsette *Táluka*—proposed closure of grazing lands from May 15th to September 15th.

24. By Government Resolution No. 2988 of 9th April 1884, *vide* Volume IV, pages 162-164, the grazing privileges granted in Panvel are extended to the Salsette *táluka* with the important limitation that no grazing is to be permitted even in the unclosed areas of forests between May 15th and September 15th. This appears to be the first instance in which the expediency of closure of pasture lands during the rainy season to prevent destruction of the growing crop has been asserted. We find, however, from a supplementary Resolution on the settlement of Salsette, No. 2831 of the 8th April 1885, (*vide* Volume IV, pages 165 to 166) that this proposal was abandoned as impracticable on the recommendation of the Forest Settlement Officer, concurred in by the Conservator of Forests and the Divisional Forest Officer.

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Extension of similar privileges to Bhivandi, Karjat and Kalyán.

25. The grazing privileges conceded in Panvel were afterwards extended in succession to the other settled *tálukás*, *viz.*, Bhivandi (Government Resolution No. 5251 of 1st July 1884), Karjat (Government Resolution No. 8018 of 10th October 1884) and Kalyán (Government Resolution No. 3890 of 14th May 1885.) (*Vide* Volume IV, pages 167 to 170, 173 to 176, and 180 to 183.)

Bassein *Táluka*.

In dealing with the Bassein *táluka* (Government Resolution No. 5919 of 12th July 1885) the same orders are repeated with a declaration that "the object to be attained is to provide an equivalent for any free grazing area hitherto lawfully enjoyed." It may be noted, however, that in none of the Resolutions following that on the Panvel *táluka* is any further mention made as to the enjoyment of the privilege of free grazing by Dhangars resident in forest villages. By paragraph 10 of the Resolution on the Bassein *táluka* "the inhabitants of forest villages, not being professional graziers" are permitted to graze their cattle and cut grass free of charge in the unclosed reserves, while "professional graziers and inhabitants of non-forest villages may, provided sufficient grazing is available for their cattle in addition to those of the forest villages," graze their cattle in the same areas on payment of moderate fees. The extension of the privilege of free grazing to Dhangars residing in forest villages in Panvel and holding land bearing an annual assessment of Rs. 20 and upwards, appears thus either to have been lost sight of or to have been considered unnecessary in the remaining *tálukás*.

26. The Bassein orders contain the further important declaration that "the Governor in Council concurs with the Collector in thinking that the grass and grazing on the old *gurcharan* lands included in forest should not be sold by auction by the Forest Department, where such a course would unduly interfere with the sufficient supply of the requirements of the forest villagers in respect of grazing and grass for their cattle and *ráb*."

Effects of the system prescribed by the orders passed on the forest settlement reports as compared with the arrangements made at the Survey

27. In judging how far the free pasturage provided for forest villages under the system above described is a fair equivalent or not for that previously enjoyed under the arrangements made at the Survey, several matters have to be taken into account. Obviously the first factor in the calculation is the proportion which the area of land assigned for free grazing at the Survey and included in any forest block bears to the area which under the sanctioned proposals will always remain open for grazing in that block. In determining how much of each block may be closed at any given time local circumstances and necessities have of course been considered, and as a result the proportion to be closed varies considerably in the different blocks. The whole of certain *bábhul* reserves in Salsette and the whole of the reserves in 5 villages of Kalyán may be closed. In other blocks of Reserved forests the proportion which may be closed is fixed at from one-sixth to one-half. Similarly the proportion of Protected forest blocks which may be closed varies from nothing to one-half.

28. These arrangements as to closure will probably be modified considerably to suit the exigencies of working plans to be hereafter introduced. Up to the present time no attempt has, we believe, been made to define the particular portions of the different blocks to be first placed under closure, but the grazing or grass of certain parts of the forest approximately equal in area to the proportion allowed to be closed has been in some places sold by auction instead of being given for the exclusive use of the villages concerned. Whether this action has resulted or not in a curtailment of the area of free grazing land previously enjoyed depends as regards each of the villages concerned, on whether the open area of the block to which they may be attached is greater or less than the area of old free grazing land which they have contributed to the formation of that block.

29. Some villages would no doubt gain and others lose by the arrangement. Let us assume for example that to form a forest block of 6,000 acres, village A. has contributed 5,000 acres of its former *gurcharan*, and villages B and C. 400 acres each, of similar lands; while from another village D. 200 acres of land set aside as Imperial forest at the Survey, have been taken, leaving its former *gurcharan* untouched. Let us further suppose one-third of the

whole block or 2,000 acres to be closed, leaving two-thirds or 4,000 acres always open for the free grazing of the cattle of the residents of these four villages. It is clear that village D. will profit greatly by the arrangement. For while it retains its free user over the whole area allotted to it for free grazing at the Survey, none of which is included in the forest block, it acquires the further privilege of free grazing in 4,000 acres of forest close at hand. Villages B. and C. also gain considerably. For the 400 acres of *gurcharan* which they each contribute to the block, they acquire free grazing privileges in ten times the area. On the other hand the area of free grazing available for village A. is reduced from 5,000 to 4,000 acres.

30. On the whole we are inclined to believe that the system would provide a fair equivalent for what was previously enjoyed, at any rate as far as the area of pasture land is concerned. If we assume that the total area of forest reserves in the Thána district will amount to 800,000 acres, that about one-half of this area will consist of land set apart for free grazing at the Survey, and that two-thirds of the entire forest area can always be kept open for free grazing, the total area of land available for free grazing for the cattle of the forest villagers will exceed that formerly enjoyed under the survey assignments by 133,300 acres.

31. Area however is not the only factor in determining whether the system gives a fair equivalent; for the grazing of the open forest will not be exclusively at the disposal of the forest villagers. The cattle of non-forest villagers and professional graziers will also be admitted on payment of fees and the advantage gained by having an increased area of pasturage may be lost if more fodder is consumed by fee paying cattle than is produced by the additional area thrown open. Probably however any loss thus caused to forest villagers would be more than made up, if they were allowed the exclusive privilege of removing the grass from the closed portions of all reserves other than valuable *kurans*.

Revised orders regulating grazing in forests of 15th September 1885.

32. As above stated the orders relating to grazing in the various Resolutions on the forest settlement reports of Thána and Kolába have not hitherto been fully carried out, because the arrangements for closure are still incomplete. Revised orders regulating free grazing and grazing on payment of fees in forest areas have since been issued for general guidance under Government Resolution No. 7467 of 15th September 1885. The chief points to be noted as regards these fresh instructions are as follows:—

Vide Volume IV, page 142.

Annual auctions of the right to graze and cut grass are to be generally discontinued, "except in the case of any really valuable grass *kurans* where it has been customary to sell the grass and grazing by auction."

Parts of the forests may be closed if planting was commenced and is going on, or will be commenced immediately, or if the preservation of young trees requires it, until such time as they can be opened to grazing with safety and advantage.

If the area thus thrown open was formerly free grazing land, or if it has been so assigned as an equivalent for other free grazing land taken into forest and included in the closed area, grazing therein will be permitted free of charge. In other cases fees will be charged, to be fixed by the Collector with the approval of the Commissioner.

In other parts of the forest, that is, those "which are not yet occupied for the purpose of forest conservancy by the Forest officers, or where grazing cannot any longer do any harm to the trees" free grazing will also be allowed if the land was formerly assigned for that purpose; or—an important provision—"where the Revenue officers declare free grazing to be needed by the villagers for agricultural purposes, or to be the equivalent of former free grazing or *gdirán*." It is further provided that fees may be charged in the non-*gdirán* parts if the Revenue officers declare this course advisable.

The carrying out of the regulations as regards free grazing is entrusted to the village officers of the villages in which the privileges are conceded.

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A maximum rate, where fees are charged, of 4 annas for a buffalo, 3 annas for a cow or bullock, and 1 anna for a sheep or goat, where the latter are admitted, is prescribed, Government reserving the right of imposing higher fees.

Forest guards are not to interfere with herds unless trespassing in closed areas, and any irregularities as regards grazing in unclosed areas are to be reported to the Revenue authorities.

All reserved forests except the portions closed for planting, &c., are to be open to free and fee grazing from 1st June to 1st February unless special circumstances render such a course undesirable.

Lastly, the orders are declared to refer to agricultural cattle only, cattle kept for profit or trade paying higher rates according to the value of the grazing supplied.

33. We shall have occasion to allude to these orders again in making our recommendations for the final settlement of the question in the Thána and Kolába districts. It is sufficient to observe here that on comparing these orders with those previously issued on the settlement reports, we find that the chief changes which will follow are first, the discontinuance of annual auctions of grazing in forest except in the case of valuable *kurans* ; secondly, the closure of all forest against free or fee grazing from February to May inclusive. It has also to be noted that free grazing is not necessarily to be given to forest villages over the *whole* of the unclosed portion of the block to which they have contributed land, as was provided in the orders passed on the settlement reports, but only where the open area consists of what was formerly free grazing land, or what may now be allotted as free grazing land either in lieu of such land taken into forest and included in the closed area, or on consideration of agricultural needs. As no fixed limit is prescribed as regards the proportion of Reserved forests to be closed and kept open at any time by the above orders, it may be assumed that the special arrangements for the forests of the settled *tálukás* of Thána and Kolába previously made remain unaltered.

34. We have shown above how the former customs of the people as regards grazing in waste lands have been affected from time to time by the operations of the Revenue Survey and by the regulations ensuing from stricter forest conservancy. We will now examine the claims of the inhabitants and the position of Government as regards the disposal of all waste lands.

Claims of the inhabitants.

35. In their memorial to the Viceroy the inhabitants of Thána of all classes claim to have exercised and enjoyed from time immemorial the right and privilege, among others, of grazing their cattle "in the village public and Government waste, pasture and forest land." They state further that this right has been recognized and maintained both under the present and former Governments by proclamations, resolutions, legislative enactments, Survey Settlements and decisions of the civil courts.

36. The general claim thus advanced to a free use by all the inhabitants of towns, villages and jungles, of all waste lands in the district of whatsoever description and wheresoever situated, is not, however, judging from the prayer accompanying the memorial and the evidence offered to the Commission, quite so sweeping a one as it would at first sight appear. From the vague way in which the claim is expressed in paragraph 4 of the memorial, it might appear for example as if residents of Bandra considered themselves entitled by virtue of their residence in the Thána district to graze their cattle free in old Imperial reserves of Mókháda. But in paragraph 28, clause 3*a*, the memorialists only ask "that such villages as have no forests of their own may be at liberty to resort" for the purposes stated, including the taking of grass for agricultural wants, "to such forests as they have hitherto been accustomed to resort to." In other words if by long established and clearly proved custom, the people of one village, having insufficient grass land within their own limits, have resorted for grass and grazing without charge to the waste lands of another village, the continuance of that custom should be authorized.

37. Nor do the inhabitants generally claim free grazing in *all* lands. They ask (*vide* clause 8 of paragragh 28) "that village sites and pastures should be free to the villagers," adding "that this will remove all inducement or temptation to go to the Reserved forest to supply their wants." And again in clause 10, they ask "that the right to graze their cattle and cut grass, &c., from the village pastures may be restored."

Nature of complaints against grazing regulations.

38. The complaints as regards grazing may therefore be reduced to two heads. First, that large areas of old free pasture land have been wrongly included within forest limits, and secondly, that the inhabitants of villages having no forest within their limits are no longer allowed to graze their cattle free, according to former custom, in the pasture lands of other villages.

Inclusion of free pasture lands in forests.

39. The first complaint is undoubtedly a very just and reasonable one, if the Memorialists can show that the inclusion in forests of lands assigned for free grazing at the Survey has resulted or is likely to result in a diminution of the supply or deterioration in the quality of the fodder required and hitherto obtained free for the support of cattle kept by them for agriculture, or purposes subsidiary to agriculture.

40. A few individual witnesses have complained that even when no closure has been attempted they have been prevented from taking their cattle to graze in the old free grazing lands of their villages which have been included in forests. Such interference, if there has been any, is in no way warranted by the standing orders, and can only have occurred, if it has occurred at all, through excesive zeal or officiousness on the part of subordinate Forest officers. By the orders passed by Government from time to time many acts have been forbidden in Reserved and Protected forests, such as lopping trees for *ráb*, and cutting live wood for fuel, but there was nothing to authorize the exclusion of the village cattle from their former free grazing grounds, except from such portions as might from time to time be closed for planting or for protection of young growth after felling operations. In such cases the villagers may probably have been warned not to take their cattle into the particular parts where they would be likely to cause damage, and this may have given rise to the complaints. But even if the warnings had in all such cases been effectively enforced the loss and inconvenience to the villagers from this cause would have been very trifling. It is more likely that the complaint as to exclusion of cattle has its origin in the general complaint that the villagers are no longer allowed to lop and cut trees for firewood and ash manure in the old free grazing lands included in Reserved forests.

41. The general complaint that since the inclusion of the *gurcharan* lands in forests, the people do not know where their cattle are to graze would certainly appear to have no good foundation. The Thána forests have not yet been divided into compartments and there has been as yet therefore no actual systematic closure of any portions. The sale to contractors, where this practice has been followed, of the right of grazing and cutting grass in forests including old *gurcharan* lands, with a proviso that the villagers shall exercise the same privilege concurrently, in the same areas, is certainly open to grave objection and might give just grounds for dissatisfaction. But as far as we can learn this practice has not been commonly resorted to and does not form the subject of special complaint.

42. In the Sálsette *táluka* in which, though the settlement has been sanctioned, the portions of each forest block to be closed have not been demarcated, the exclusive right of cutting grass and grazing in certain portions of the block described by boundaries and approximately equal to the area of the block which is allowed to be closed according to the proportion fixed in each case, has also been sold to contractors during the past year, leaving the rest of the block for the exclusive use of the villagers. This practice though far less objectionable than giving concurrent rights to contractors and villagers in the same areas, may also in some cases operate harshly as regards the interests of the villagers; for it is clear that the value of the privilege conceded to the residents of forest villages by the orders on the settlement reports, of removing grass from Reserved forests to burn on their fields, must be materially lessened thereby,

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Any inconvenience, however, which may have arisen from the above practices, will be removed by the recent orders of Government, by which the sale by auction of the grazing of any forest lands other than really valuable *kurans* will be discontinued.

43. The grazing regulations introduced since the passing of the Forest Act have not we think caused to forest villagers of Thána any such inconvenience as would have, in the absence of other grounds of complaint, provoked serious opposition. The complaints on this head are evidently based more on an apprehension of what may hereafter happen than on what has hitherto actually occurred—on future possibilities rather than present restrictions. Provided equitable arrangements as regards grazing are substituted for those made at the Survey, we can discover no reasonable objection to placing under forest conservancy any waste lands suitable for that purpose, whether such lands have been specially set apart for free grazing at the Survey or not. The inclusion of such areas within forest limits is not necessarily inconsistent with the continuance of equally liberal privileges either in the same or even extended areas, and we entertain no doubt that a full and reasonable equivalent for all former privileges in this respect can be given throughout the Konkan districts without appreciable injury to the forests.

44. Equivalent *areas* can certainly be given for free grazing. Mr. Atkins observes in one of his replies to the circular questions on forest administration*: "In the inland *talukás* of the Thána District the grass is usually excessive and there is not the slightest difficulty about grazing. Consequently the grazing question need not be considered in any way in deciding what land shall and what shall not be included in forest. If any grazing land is included and the remainder is insufficient for the villagers sufficient free grazing privileges can be allowed in the forest." And we have shown above in paragraph 30 that if two-thirds of the entire forests in Thána are kept open for free grazing a larger area can if necessary be made available for this purpose than was assigned at the Survey.

* *Vide* Volume III, page 17.

Effects of forest conservancy on grass supply.

45. Nor do we think there is any reason to fear that the supply of pasturage will suffer either in quantity or quality by reason of stricter forest conservancy. This contingency is not even suggested by the Memorialists. Questions on this point have, however, been submitted to selected witnesses, the replies of which are printed (*vide* Volume II, Part III, pages 344 to 347).

46. There can be no doubt that forest conservancy in its earlier stages and so long as the shade cast by the trees is not too heavy improves the quality of the grass. This improvement is especially noticeable as regards *bábhul* reserves in the valleys of the principal rivers of the Deccan. In the course of a recent lecture on Indian Forests delivered in the Conference Hall of the Colonial and Indian Exhibition, Dr. Brandis, late Inspector General of Forests, made the following remarks bearing on the subject:—*In the drier parts of India grass grows more plentifully even in exceptionally dry seasons, under the partial shelter of trees and bushes. In some of the Rájputána States the forest reserves which the Native Chiefs had ages ago established, chiefly for shooting, are in times of drought opened to the cattle of the surrounding country; they feed upon the grass, and, to some extent also upon the branches of the trees and bushes, and much mischief and suffering is prevented thereby.*

Acting upon this experience, State forests, to the aggregate extent of 89,000 acres, have been established in the adjoining British district of Ajmere, and the grass which grows up abundantly under protection on these areas, has already on several occasions furnished a most welcome supply of cattle fodder to the villages in the vicinity of these forests. For similar purposes have State forests been formed in some of the drier districts of the Deccan and North-Western India, and this is the commencement, very small, as yet of a measure, the future importance of which it is difficult to estimate.

47. On the other hand grass is undoubtedly destroyed by dense forest growth, such as the forests of Kánara, and it is possible that in the more humid parts of the Konkan the tree-growth may in years to come to some extent drive

out the grass. But grass will always grow abundantly in the portions of the forests which have been recently cleared. Moreover the cattle do not depend on grass alone in the forests. Leaf fodder is supplied by a great variety of forest trees and shrubs the supply of which would be naturally increased by conservancy. The objection that forest conservancy will ultimately affect the grass supply unfavourably is not one which need in our opinion be taken into practical account in determining what areas should be included in forests. In the Deccan forest conservancy is more likely to improve the grass supply than to injure it, while in the Konkan the possibility of any inconvenience arising from this cause is too remote a contingency to justify any relaxation in the efforts now being made to arrest denudation.

48. Apart however from the question whether the inclusion of village pasture lands in forests is likely to result in a diminished supply of grass or not, the propriety of such inclusion, as constituting a breach of the obligations incurred by Government at the survey settlements has been so prominently called in question that it is necessary to note briefly the arguments used for and against such procedure.

49. It will be seen from the summary of the replies to question 4 (*vide* Volume III, pages 14 to 20) of the circular questions on this point, that a very substantial majority of the officers consulted, express a decided opinion that the inclusion of such land in forest is in no way inconsistent with promises made at the Survey, provided a fair equivalent is given. Those who object to such a procedure rest their objections mainly on the arbitrary manner in which the change is alleged in many cases to have been effected; on the fact that no steps were taken to obtain the previous consent of those interested; that proper provision has not in all cases been made for a continuance of former privileges in the same or equally suitable areas; and that the conversion of such land into forests and its consequent protection by forest subordinates must necessarily cause annoyance to the people.

Position of Government as regards disposal of waste lands.

50. The legal position of the State as the owner of all waste lands is clear and has been laid down in various decisions of the courts. The power to assign such land from time to time for such purposes as may be deemed fit or to levy assessment thereon, which follows from the proprietary right, has also been consistently asserted and exercised by Government. The exercise of such powers by Government as occasion may arise no doubt entails a corresponding obligation to use them for the best interests of the people. That Government have not been unmindful of this obligation is shown by the correspondence of 1844 quoted in the Précis furnished to the Commission (*vide* Volume IV., page 5). The Revenue Commissioner, S. D., in reporting on the practice as regards grazing in different districts then wrote: "There is consequently I think nothing to call in question the right of Government to assign all cultivable lands or to derive a revenue from waste by means of a tax on the cattle and sheep grazed on it, though the latter has of late been expressly limited to herds and flocks other than those of the villagers." In passing orders on the report Government justly observed: "Notwithstanding the right of Government to levy an assessment on all land the Governor in Council is of opinion that care should be taken that no encroachments are made upon what in any village is the *gáirán* from time immemorial, unless it should be found to be excessive in quantity and far beyond the means of the resident population."

The same Resolution (No. 3621 of 16th October 1844) points out that the *gáirán* is generally a portion of the unarable waste and expresses disapproval of allotment of arable waste for common pasturage, stating that "the rayats if requiring pasturage beyond that afforded by the established *gáirán* can provide it by paying the assessment of such land or by purchasing the right of occupancy where the arable waste may be sold." By the same orders preference is justly given to the villagers over strangers in the disposal of arable waste for pasturage. "This waste should be let out by fields and first offered to rayats on low and reasonable terms and in no case should strangers and more particularly speculating contractors be admitted to compete except where the rayats may, from the *gáirán*, from their own holdings or from previous purchases of waste, be fully provided."

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51. As regards the assignment of lands for free grazing at the Survey Mr. Atkins points out in his evidence that the same orders, *viz.*, Government Resolution No. 1036 of 17th February 1853, which authorized the Survey officers to make such assignments and record them in the village papers, expressly provided that the same lands or any portion of them could, at any time, be devoted to a different purpose with the sanction of the Revenue Commissioner. Section 32 of Act I. of 1865 which applied equally to the *tálukás* settled before and after its enactment, and Section 38 of the Land Revenue Code of 1879, which has superseded Act I. of 1865, contain precisely similar provisions.

Whether, as some Forest Settlement Officers hold, the assignment of land for the free grazing of a village community at the Survey Settlement invests the residents of that village with rights over the land of such a nature as are contemplated by Section 4 of the Forest Act, or whether as others have held, such assignment is merely a permissive or revocable privilege, it is quite clear that such right or privilege, by whatever term we may call it, can be legally extinguished at any time under the discretionary authority conveyed by Section 38 of the Land Revenue Code.

52. We have no doubt whatever as to the legality of setting apart for forests and closing if necessary areas previously assigned for free grazing at the Survey, provided the requirements of Section 38 of the Land Revenue Code are fulfilled. But we are also of opinion that by making these assignments of land for free grazing at the Survey Government have incurred a very strong moral obligation not to revoke them lightly or take any action which will directly or indirectly lessen their value without good and substantial cause being shown. At the same time we fully recognize the fact that public interests require that a large proportion of these lands in the Konkan districts shall be placed under forest conservancy, and we are confident that under the arrangements which we propose, and which will be described in due course, there will be no difficulty in giving, by liberal forest regulations, a fair equivalent for all former privileges enjoyed in the lands so re-appropriated. If the inclusion of such lands in forest were incompatible with arrangements which would satisfy the reasonable wants and claims of the people as regards grazing, we should certainly hesitate to describe such areas as lands which—in the words of Section 34 of the Forest Act—can be classed or reserved as forests with "justice, equity and good conscience."

Opposite views as to the intention of the Survey officers in assigning lands for free grazing and forest conservancy combined

53. If lands assigned exclusively for free grazing at the Survey can be legally appropriated for forests, it follows *à fortiori* that lands assigned for free grazing and forest conservancy combined can be similarly treated. The exact intention of the Survey officers in making these dual assignments is not quite clear and is not perhaps of great importance. But as a good deal of the time of the Commission has been taken up in considering the arguments on this point on either side it may be as well to state them briefly. On the one hand the Memorialists contend that it was intended that the *whole* area of the lands thus assigned should remain open for grazing subject solely to the one condition that the trees should be preserved. The literal construction of the entries in the registers making such assignments, and the absence of remarks implying any future intention of re-distributing the area and separating the portions to be allotted for free grazing from those to be set apart as Government forest are relied on in support of this view.

54. On the other hand Mr. Atkins endeavours to show that it was always intended as regards these lands that the forest area should be separated, as opportunity for demarcation arose, from the free grazing area. He points out that the Forest Committee of 1863, numbering amongst its members Colonel Francis who would naturally have been in the best position to interpret the intention of all proceedings taken at the previous surveys, recommended "that Forest demarcation officers should deal with the forest allotments made at the Survey Settlement and should refrain from demarcating forests in which there were no forest allotments." He thus argues with apparently very good reason that "as these forest allotments were expressly stated, to consist partly of forest land in

Vide Volume II., pages 46 and 47.

which grazing was allowed, that is to say, '*ránrakshan gurcharan*,' it follows that the demarcation officers were intended by the Committee of 1863 to deal with such lands when carrying out their orders, which were to divide the forest allotments of each village which contained a considerable amount of forests into two portions, one for Imperial reserve and the other for village reserve. Village reserves were always treated as free grazing lands. Major Waddington when reporting on the Survey Settlement of Kolvan *táluka*, mentioned that he had demarcated forest reserves in a few villages; but that in most villages the work still remained to be done. In many of the most jungly villages of Sháhápur, containing enormous areas of particularly well wooded land in which most certainly Major Waddington, if he had had time, would have demarcated Imperial and village reserves, no such demarcation has ever been made, and I have observed that in all these villages the whole of the unassessed waste land is classed *ránrakshan gurcharan*, and I gather from this that Major Waddington, as a temporary measure, classed these lands in this way, intending that subsequently either he himself or some special demarcation officer, perhaps Captain Lloyd, who was then working in other parts of the district, should deal with such *ránrakshan gurcharan* numbers and decide which part of them should be Imperial reserve, *i.e.*, *ránrakshan* and which should be village reserve, that is to say, for practical purposes, *gurcharan*. I gather that when Major Waddington in his survey report referred to above wrote of the demarcation of forest reserve by himself he meant the demarcation of what were known as Imperial and village reserves, *i.e.*, *sarkári rán* and *gávche rán* or *gávbhág* respectively; because under the orders then in force and for the carrying out of which in the *táluka* previously settled one or two special parties of Survey officers were at that time actually employed in forest demarcation. There were to be no forests except Imperial and village reserves. I have explained above the meaning I attach to the *sherás* relating to *rán rakhan gurcharan* in the *tálukás* settled before the forest Committee for 1863, *viz.*, that some measures of forest conservancy in those lands were considered necessary by the Survey officers, for which, in the absence of a Forest Department, they attempted to make provision in this way. As regards the *tálukás* settled after 1863, I gather from Major Waddington's report and procedure in Kolvan that the entry of *rán rakshan gurcharan* was made opposite all large unassessed numbers with the express intention that forest demarcation officers should be perfectly free to demarcate such numbers for Imperial and village reserves subsequently as might be thought necessary."

55. Mr. Atkins' views on this point may or may not be correct. There is no doubt, as he states, that the Forest Committee of 1863, of which Colonel Francis was a member, considered—as we now consider—that it was perfectly open to Government to deal with these former assignments in the way recommended with due regards to the wants of the people. They may well have held this view without regard to any particular intentions which might be attributed to the officers who made such assignments previous to 1863. Taking, however, all the circumstances into consideration we think the fairest course will be in calculating the sufficiency of the equivalent to be given for the inclusion of such lands in Reserved forests to consider the *whole* area, except such portions as may have been converted into Imperial reserves between the introduction of the Survey and the passing of the Forest Act, as having been assigned for free grazing at the Survey.

Recommendations of Commission as to grazing arrangements for residents of forest villages.

56. We think the principle first laid down in the orders on the settlement report of the Alibág *táluka* is a sound one. Residents of forest villages will have, we think, no cause for complaint if they are allowed to graze their cattle and cut grass for their own use free in the unclosed portion of the forest block, in which are incorporated any or all of the forest lands of their villages. It would be difficult, if not impracticable, to allot free grazing in forests to forest villages in exact proportion to the area of former free grazing land contributed to the block by each village. We therefore advise that no distinction in this respect should be made and that the residents of all villages whose lands have been taken, whether these lands form parts of the area assigned for free grazing at the Survey or not, should have equal privileges as regards free grazing throughout the whole area of the forest block which may at any time be open.

57. It may be said that by this arrangement unnecessary privileges, for which no reasonable claim can be made, will be given to villages, which have contributed to a forest block only lands formerly demarcated as Imperial reserve, and still have an undisturbed user of whatever land was assigned to them for free grazing at the Survey. But the villages from which at least some portion of the old *gurcharan* lands has not been included in the recent demarcation, must be so few that it would not be worth while making what might appear an invidious distinction between them and other forest villages.

It is moreover clearly desirable that the rules as to the exercise of free grazing privileges or indeed of all other privileges should be as few and simple as possible to ensure efficient working. The broad rule that all forest villages shall have equal privileges of free grazing in unclosed forest areas is easy to be understood both by the people and the Forest and Revenue subordinates. But if different privileges were given to different forest villages, however equitable such distinction might be in theory, complications would arise in practice, and an element of uncertainty would be introduced which might seriously interfere with the successful working of the system.

58. We would not, however, confine the privilege of free grazing in forests to permanent residents of the contributory village, but would give equal privileges in this respect to all who cultivate lands in forest villages, whether they reside within the limits of such village or not. Privileges of this nature are conceded, chiefly if not solely, in the interests of agriculture. The wants of each village as regards grazing are and ought to be in due proportion to its cultivated area. All who cultivate lands in a village, whether permanently residing within the village limits or not, should, therefore, have equal privileges in this respect. The same principle has been adopted in the rules under Section 44 of the Land Revenue Code for regulating privileges in grazing lands excluded from forests now introduced in Thána with the approval of Government. By these rules "cultivators whether resident or not in a village" are allowed to cut branches and twigs of other than certain reserved trees for ash manure, and it seems equitable that the regulations as to free grazing in forests, should contain a similar provision in favour of non-resident cultivators.

Vide Volume IV., pages 200 to 201.

Limitation of free grazing privileges in forests to agricultural cattle.

59. We have next to consider whether the privilege of free grazing in forest should be limited to the cattle actually needed and kept for agricultural purposes, or whether all cattle the property of residents and cultivators of a forest village should be admitted without distinction. We exclude from this consideration all professional graziers whether permanent residents or not of a forest village as their wants and claims will be separately examined.

Practice in North-Western Provinces and Oudh.

60. From the replies of the Government of the North-Western Provinces and Oudh to the questions on the subject of grazing in forests submitted to it by the Government of Bombay, it appears that no limit in proportion to cultivation of the number of cattle to be admitted to free grazing has yet been fixed in those provinces. But in Oudh and Pilibhit Government has reserved the right to make such limitation, should it be, at any time, advisable to do so. In the Central Circle the question was settled in 1879 by allowing the villagers to graze their cattle free up to double the number that they were at that time in the habit of grazing. In Saháranpur and Dehra Dun lists have been drawn up of the villages entitled to grazing at privileged rates, and the number of cattle which each village is entitled to graze at these rates has been entered in the revenue settlement record. Cattle grazed by these villages in excess of the specified number have to pay the same rates as those of unprivileged villages.

Practice in Madras.

61. In Madras also no such limit has yet been fixed as regards free grazing. We learn from the Resolution of the Madras Government, No. $\frac{3098}{\text{Forest 017}}$, that "no definite restrictions have as yet been imposed as to the number of cattle to be admitted to graze over given areas of Reserved forests or lands. Where legal rights are admitted at settlement it is intended that the Forest Settlement Officer shall distinctly specify in his decision the number of head of cattle to which the right of pasturing extends. But setting aside such exceptional cases it is

thought that the regulation of grazing in Reserved forests[1] should be left, as far as possible, in the hands of the professional officer in charge and that no hard and fast rule can be laid down on the subject."

62. From paragraph 2 of the same Resolution we find that it is expected that where the several processes of settlement, demarcation and protection are complete the Reserved forests[1] of the Presidency will be practically free from all grazing rights, and the pasturing of cattle therein will only be permitted at the discretion of the department and on payment of fees. "At present, as a matter of fact, it is believed that free and unrestricted grazing is permitted in most districts even in Reserved forests, unless and until these have been placed under special protection."

In the "reserved lands," which, as we gather from paragraph 3 of the same Resolution "will correspond more and more closely with the Protected forests of other provinces," as conservancy developes, it is intended to allow grazing only on payment of fees, except in the case of absolute legal rights of pasture being established.

63. Free pasture as appears from paragraph 4 will be provided as far as possible in unreserved lands; but the possible contingency of having to provide for the exercise of customary privileges as well as of legal grazing rights on reserved lands is recognised.

"On unreserved lands the pasturing of cattle will always be permitted free of charge, and in order to provide still further for the due exercise of such customary privileges as may have been, or may in future be, affected by the constitution of Reserved forests or reserved lands, a rule has been promulgated by Government to the effect that where the practice of grazing has long and steadily obtained, the Collector shall set apart once for all such areas as he may consider reasonable for this purpose, and shall determine by the villagers of what villages they shall be enjoyed. Considerable difficulty is anticipated in the working of this rule, which has as yet been brought into force only in a small portion of the Nilgiri District, and the Board apprehend that, should its general introduction prove impracticable, it will be necessary to provide for the exercise of customary privileges as well as of legal grazing rights on reserved lands. In Nellore, the chief cattle breeding district in the Presidency, the grazing difficulty was solved some years ago by the introduction of a rule which allows the rayats of a village the use of waste lands, for free grazing up to a limit, if available, of 150 per cent. on the cultivated area of the village, any surplus waste lands above this limit being leased out annually to large cattle-owners."

64. The principle of the system which it is intended to introduce in Madras is thus stated in paragraph 6.

Practice in the Panjáb, Ráwal Pindi District.

"While grazing in reserved forests should thus be entirely secondary to the improvement of the forest estate and remain chiefly in the hands of the Collector's professional assistant, that in reserved lands, the conservancy of which will be less intense, should be regulated more directly by the Collector himself who should enforce such restrictions as to numbers and localities to be thrown open from time to time as circumstances may render necessary or desirable."

Kángra District.

65. From the replies received from the Punjáb, it appears that in the Ráwal Pindi district "in regard to areas in Reserved forests over which grazing rights have been granted, the restrictions imposed as to the number of cattle have in general been the condition that the number of cattle grazed shall never exceed double the number of cattle found to be the property of the right-holders at the cattle census lately taken, and that such cattle shall be *bonâ fide* the property of such right-holders." Similarly "in regard to Protected forests the restriction imposed has been that the cattle grazed shall be *bonâ fide* the property of the right-holders, and a saving clause has been inserted in the '*Wazibularz*' (administration paper) of each Protected forest to the effect that the exercise of such rights shall be in reasonable proportion to the status of the right-holder as a *zamindár* and to the private requirements of the average *zamindár* as such."

[1] NOTE.—The Reserved forests here alluded to are forests as constituted under Chapter II. of the Madras Forest Act V. of 1882.

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66. In the Kángra district it is stated that the reserves having been mostly selected at a distance from villages, so that the demands of the people can be satisfied from other areas, as a result the rights admitted are comparatively few and held by only a few hamlets. "The right to pasture has been as far as possible excluded, but in some places it was necessary to admit such a right and in these cases the maximum number of cattle, sheep and goats that may graze, and the time they may graze have been fixed. In some cases the right has been admitted to individual revenue payers: in others to a hamlet in the aggregate, and in this latter case it has been provided that if any dispute arise as to the number of cattle, sheep or goats that any right-holder may graze, the number shall be determined with reference to the relative amount of revenue paid by each right-holder, the total for the hamlet never exceeding the recorded maximum." * * * * *. "It is declared in all cases that the right is appendant to cultivated land, and can be acquired and alienated only with such land. It is also provided that with the sanction of competent authority all rights may be suspended in a part of the forests, provided that the area open for the exercise of these rights be sufficient and in a locality reasonably convenient for the exercise of these rights."

Free grazing allowed in the Punjab only when rights to it are recorded at a Forest Settlement.

67. The Conservator of Forests, Punjab, also points out that "free grazing" in that province "is never allowed except when there is a recorded right entitling persons or communities to graze their animals free," and that "the number of cattle admitted to free grazing is regulated solely in accordance with the rights recorded." In defining these rights, however, the Settlement Officer has taken "into consideration the area cultivated by the claimants."

General conclusions.

Limitation necessary as a rule; free grazing does not mean unlimited grazing: but the term 'agricultural cattle' should be liberally interpreted.

68. Whether claims to free grazing in forests are recorded by Forest Settlement Officers as rights or granted as permissive privileges by Government, some limit is clearly necessary as to the number and description of cattle to be admitted. It is clear that in making assignments for free grazing at the Survey, it was never intended that the right or privilege thus granted and recorded should be an unlimited one, and out of all due proportion to the reasonable wants of the agricultural population for whose benefit the arrangements were made. If a Forest Settlement Officer finds such a right under Section 11 of the Forest Act, he is bound by Section 13 to define the right.

If Government concede free grazing as a permissive privilege, they can *à fortiori* prescribe the limits within which it should be enjoyed, both as regards areas, number and kind of cattle. The justification for all claims of this nature rests primarily on the necessity of maintaining cattle for agricultural operations. It is only equitable, therefore, that the privilege should be restricted to *bonâ fide* agricultural cattle. We would, however, interpret this term liberally so as to include, in addition to the stock actually needed for field work, a fair proportion of breeding and immature animals, milch cattle to supply the cultivator's domestic wants; and we would also treat as agricultural cattle, within reasonable limits, animals owned and kept for domestic use by residents of a village, who though not themselves actually holding and cultivating land, render useful service to the village communities.

Special reasons for imposing no fixed limit as to number of cattle to be allowed free grazing.

69. But while we are of opinion that the broad rule should be laid down and enforced wherever necessary, that all free grazing should be restricted to agricultural cattle, we consider that there are special circumstances, as regards the Thána district, which make it unnecessary and inexpedient *at present* to impose a limit on the number of cattle to be admitted to free grazing in forests, as the *bonâ fide* property of residents and cultivators of forest villages.

Total number of cattle in Thána not in excess at present of agricultural requirements

70. In the first place we find from the statistics at our disposal that the total number (306,040) of cattle now kept by the residents of Thána is not more than is required for the proper cultivation of the area annually cropped. According to the returns furnished to us the area of rice and garden cultivation aggregates roughly 3¼ lacs of acres, while the area under dry crop (*varkas* and *rábi*) is 1¾ lacs acres yearly. A 'plough' of land is estimated in the Thána Gazetteer to be from 3 to 3½ acres in the case of rice land, and twice that area in dry-crop cultivation. As the Director of Agriculture has independently estimated that a pair of oxen can till 5 acres of rice partly early and partly late,

the Gazetteer estimate may be taken as approximately correct. Garden land, where a good deal of the tillage is done by hand, may be taken for the purposes of our calculations as rice land, and *rabi* or superior dry-crop as *varkas*. Taking, therefore, one pair of oxen for every 3½ acres of rice and garden land, and every 7 acres of *varkas* and *rabi* land, the number of cattle required to till the cultivated area of Thána will be 2 $(\frac{3\,25,000}{3\frac{1}{2}}+\frac{1,75,000}{7})$ = 235,714. If we add to this number a fair proportion of young and breeding stock and milch cattle, as well as animals required for domestic purposes by persons other than actual cultivators, who render useful service to village communities, the total number of cattle returned, *viz.*, 306,040, is by no means in excess of the *bonâ fide* agricultural needs of the district. This is also true as regards Kolába district.

Alleged decrease of cattle in Thána in recent years.

71. Several of the Memorialists' witnesses have stated that it is within their knowledge that the number of cattle in particular villages has greatly decreased in recent years. We have endeavoured to get reliable statistics on this point showing the number of horned cattle in each *táluka* at the present time as compared with the number in the year immediately preceding the introduction of the Survey, but have failed owing to the fact that in the earlier returns only the cattle actually employed in agriculture are included. From the table which is quoted at page 623 of the Thána Gazetteer (Vol. XIII) it would seem that during the thirty-four years ending 1879-80 cattle have decreased from 386,658 to 354,338 and sheep and goats from 48,644 to 42,316. How far these figures are reliable it is impossible to judge. The large decrease in cattle as shown by these returns is scarcely consistent with the increase in tillage which took place between 1868-69 and 1879-80, *viz.*, from 970,220 acres to 1,015,341, or 4·65 per cent., or with the large increase in the number of carts, *viz.*, 33 per cent., between 1845-46 and 1879-80.

Contention that decrease in cattle is due to forest restrictions baseless.

72. The Thána Memorialists contend, as might perhaps be expected, that the decrease in cattle is a consequence of stricter forest conservancy. We find nothing to support such a contention, and the description given above of the extent to which the regulations as regards grazing consequent on forest conservancy have hitherto been enforced will show that no such interference with former custom has as yet taken place, as would in the absence of other causes, have led to a decrease in the number of cattle. It would be equally plausible and probably equally without foundation to attribute the decrease, if there really has been any, to the very large development in recent years of the export trade of grass from occupied lands.

Further reasons for imposing no limit in Thána at present.

73. An additional reason against imposing a limit at present on the number of cattle to which free grazing is to be given in the Thána forest to residents of forest villages, is the fact that the original Survey assignments for free grazing were very liberal in that district. The total area of the lands assigned for this purpose at the Survey amounts roughly speaking about 660,485 acres. Taking the average number of horned cattle in the district at 300,000 we have thus 2·2 acres of free grazing allotted for each head of cattle. The system which we advocate in substitution of the arrangement made at the Survey, will, we are confident, meet all the reasonable wants of the forest villagers, but considering the very large areas previously available for free grazing to this portion of the population, the advantage of the change to them will not be so marked as it would be, if introduced in other districts where the allotments for free grazing were made with a more sparing hand. Government should, however, distinctly reserve the right of imposing such a limit should it be found in after years that the privilege is being abused, and that cultivators are keeping for profit a number of cattle far in excess of their agricultural needs.

Right to impose limit should be reserved in case of abuse of privilege.

Limit when imposed should be in proportion to area cultivated by each individual.

74. Such a limit if imposed at all should be, we think, strictly in proportion to the area cultivated by each individual resident. The system followed in some other provinces of prescribing a maximum number of animals belonging to one village to be admitted to free grazing, without at the same time fixing a limit to the number of animals which each cultivator may claim exemption for, may be practicable where the old village system is still a living reality, but would not, we think, succeed elsewhere.

Special reasons why limit if im-

75. Assuming, however, that it may be found necessary in Thána in after years to limit free grazing in proportion to the number of cattle required by

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each cultivator, there are special reasons why the free allowance should be made as liberal as possible. The conditions of cultivation in that district necessitate an abnormally large consumption of all materials available for ash manure in preparing seed-beds for rice and other grains. We know both from the evidence and Mr. Ozanne's experiments that the most valuable material used for this purpose is cowdung, and that the greater the supply of cowdung the less will be the demands for loppings of trees, and as a consequence the less the drain on the forests to supply the latter material. From a forest point of view the encouragement of the production and full utilization of cowdung for this purpose is much to be desired. We think, therefore, that this circumstance should be taken into due account, in fixing the number of cattle to be admitted to free grazing in forests whenever it may be deemed necessary to impose a limit.

posed at all should be liberal in Thána; value of cowdung as material for ash manure.

Question whether it is advisable to fix a close season during which grazing privileges in forest shall be suspended.

Object of exclusion of cattle during hot months.

Object of exclusion of cattle during monsoon months.

76. We have next to consider whether it is practicable or expedient to fix any particular season during which free or fee grazing should be allowed in the unclosed reserves, and to stop all grazing at other times of the year. The orders of September 1885, contemplate the exclusion of cattle from forests during February, March, April and May. The order passed on the Sálsette Settlement but afterwards withdrawn, would have excluded them from May 15th to September 15th. In the interests of fire conservancy exclusion of cattle from forests during the hot season is no doubt desirable wherever this can be done without serious inconvenience. If cattle were also excluded during the early monsoon months, when the grass is sprouting, a larger crop would probably be obtained.

Inconvenience arising from close

77. But in Thána as in other forest districts, the cattle are to a great extent dependent during the hot months, when the grass has been exhausted, on the leaf fodder to be obtained in forests, and the total closure of the forests at this time against grazing would certainly cause great inconvenience and be felt as a grievance. As far as fire protection is concerned any thing short of total closure would be practically useless, for if cattle are admitted at all, say, into certain areas defined and protected by fire paths, they and their attendants will, whether intentionally or not, be sure to stray occasionally beyond these limits. Exclusion of cattle during the monsoon months would also, as was pointed out in the case of the Sálsette *táluka*, cause much inconvenience. In these months when the low-lying lands are inundated and cropped with rice, and the upland occupied lands are studded with patches of hill grain cultivation, the forests are the only convenient grounds for the cattle not actually employed in the fields. The grass which grows in the Thána forest lands is ordinarily of very coarse and inferior quality. It makes good *ráb* material but poor fodder. Its vitality during the months of heavy rainfall is also so strong, that it is not easily repressed, even by the trampling of cattle or close cropping. Any benefit likely to arise from the exclusion of cattle during this period would be dearly bought at the trouble and inconvenience which such a measure would entail.

General conclusion.

78. As far as Thána is concerned, therefore, we do not recommend any close season, during which free grazing privilege, in unclosed forest areas shall be suspended. Cattle will of course be excluded rigidly at all times of the year from those portions of the forests where closure is necessary for planting operations or preservation of young trees, but we cannot recommend, under existing circumstances, the exclusion of cattle during any portion of the year from any other forest areas, which will ordinarily be available for free grazing. At the same time it might be well for Government to reserve the right to impose a close season hereafter, should altered circumstances render such a course expedient and practicable.

Proportion of forest to be closed at any given time for conservancy operations.

Practice as regards closure in other provinces.

79. The proportion of a forest which may be closed for conservancy operations and preservation of young trees, must necessarily vary in each block, according to local circumstances and working plans. The replies to the questions asked by the Bombay Government on this subject show that in other provinces also no fixed proportion is laid down applicable to all reserves. In the North-West Provinces and Oudh rather less than a quarter of the entire forest area is closed against grazing. The replies from the Madras Government give no definite information on this head beyond the statement of Mr. Gamble, the Conservator of Forests, N. D., that in the Reserved forests of the Nilgiris "the practice

is to close such forests as it may be necessary to close for the purpose of reproduction or otherwise and to open the rest to grazing on payment" and the expression by the same officer of his hope that this practice will be adopted in all districts. In the plains of the Panjáb, the question does not apparently arise, for we are told that "it has been found possible, after providing for these requirements (grazing and fuel) to reserve absolutely and unburdened by any rights whatsoever all jungle waste in excess of the area surrendered to the village on the above principle." In the hill district of Ráwalpindi, as appears from the reports of the Settlement Officer, provision has been made for the rotation of the forest area, over which grazing rights have in special cases been granted, with neighbouring areas, so as to give each a fair chance of reproduction; but the proportion thus closed in rotation is not stated. In the case of Protected forests Government has the power to close one-fourth if necessary for 20 years. In the reserves of the Kulu district it is "provided that with the sanction of competent authority all rights may be suspended in a part of the forest provided that the areas open for the exercise of these rights be sufficient and in a locality reasonably convenient for the exercise of these rights." In the case of the first class Protected forests of Kulu we are informed that "the evil effects of grazing will be prevented by closing parts of the forest in accordance with the record prepared for each. The maximum that may be closed at one time has been roughly fixed at ¼th or ⅓rd or ½ of the whole area, with reference to existing circumstances, and Government has a right to close at any time up to this maximum, whatever the increase of grazing may be."

General conclusions.

80. The reports as to the practices obtaining in other provinces fully support the general conclusion, on which our recommendations are based, *viz.*, that the closure of portions of forest for reproduction or other measures of conservancy is not inconsistent with the exercise of rights of free-grazing, even when such have been claimed, admitted and recorded as absolute legal rights, "provided," to use the words of the Forest Settlement Officer of the Kángra district "that the area open for the exercise of these rights be sufficient, and in a locality reasonably convenient for the exercise of these rights." No hard and fast rule as to the exact proportion of each block to be closed, applicable to all forests and all localities can be laid down. In the wilder parts of Thána such as the Mokháda *peta*, where the area of forest and waste land is excessive, and the population very sparse, it may be found possible to close even entire forest blocks without giving ground for reasonable complaint. In the more thickly populated and more extensively cultivated tracts no larger area should be closed against grazing than is strictly necessary for the preservation of the forests. In such localities, pending the completion of working plans the only portions of the forest which need we think be closed against grazing, are those in which planting operations have been commenced or in which owing to recent fellings the admission of cattle would cause injury to young shoots. The working plans when prepared will of course include definite proposals as regards closure in rotation of different portions of each block. Such proposals should always, before final sanction is accorded to them, be submitted to the Collector of the district, in order that he may satisfy himself that the areas left open will suffice for the reasonable grazing wants of the villages dependent on it, and that he may, in case such condition is not fulfilled, procure such modifications as may seem necessary.

Proposals as to the closures,—no hard and fast rule possible

Annual auction of grass and grazing except in case of valuable *kurans* should be discontinued in closed as well as open forest areas.

81. We would further recommend that the guiding rule laid down in paragraph 1 of Government Resolution No. 7467 of 15th September 1885, *viz.*, that the practice of annual auctions of grass and grazing in forest areas should be discontinued except in the case of really valuable grass *kurans*, should be applied not only to the unclosed areas of forests, *but to the closed portions also.* As we have before remarked the value of the privilege given to forest villagers of cutting and removing grass, with the permission of the forest officers from the closed areas, from which cattle are to be excluded, must be rendered more or less nominal, by the sale to contractors of the right of removing grass from the same areas. The removal of grass from such localities is clearly desirable as a protection from fire, and no more injury will result to the forests by allowing the people to remove it for fodder or *ráb*, than by letting a contractor do so. In the wilder parts, where the grass in such areas is greatly in excess of the wants of the villagers,

the sale of the grass without the right of grazing, would yield nothing. Even in the more populous tracts the revenue from such a source is very insignificant. The concession to the residents of forest villages of the exclusive privilege of cutting and removing grass from the closed area of the block to which their village is attached would be but a very slight pecuniary sacrifice, and would go a long way to mitigate any inconvenience resulting from the exclusion of their cattle from these areas.

Exclusion of cattle of non-forest villages from the free pasture lands of other villages to which they formerly resorted

82. Having fully described the arrangements we propose should be made for the continuance of free grazing privileges to the residents and cultivators of forest villages, we pass on to the second head of complaint as stated in paragraph 38, *viz.*, that the inhabitants of villages having no forests within their limits are no longer allowed, under the new regulations, to graze their cattle free, according to former custom, in the pasture lands of other villages.

83. Numbers of witnesses have given evidence of the existence of such a custom in the case of particular villages, and that the practice is not objected to by the residents of the villages within whose limits it is followed.

The replies to the circular question prepared by the Commission on this subject (*vide* Volume III, pages 41 to 43) show that a majority of the officers consulted, who have local experience of the Thána district, concur in the opinion that the claims to the continuance of old custom in this respect, if not reasonable in the case of *all* non-forest villages, are at any rate well founded in special cases.

84. There is reason to believe that what were formerly large villages with numerous hamlets attached to them, have in some cases, for convenience of revenue administration, been split up, within comparatively recent times, into a number of separate villages. In such cases what was formerly the common forest and grazing land of the central village and its subordinate hamlets, may have been included, in effecting such separation, within the limits of one only of the newly defined villages. Mr. Atkins in his reply to the circular question framed to elicit information and opinion on this subject writes as follows :—

"There is, however, one class of non-forest villages the residents (or to speak more accurately the *vatandárs*, *i.e.*, the members of the real village community, the descendants of a common ancestor who founded the village) of which have, I must admit, a fairly good claim to be treated on the same terms as forest villages. I refer to those non-forest villages which are situated *very* near the forests and which there is some reason for believing to have been once united with the forest villages nearest to them. I have not got together sufficient detailed evidence on this point to lay before the Forest Commission; but I have come across some cases, and from analogy, I imagine that those cases are numerous, which have led me to believe that Thána villages were in ancient times much larger than they now are; that they were divided into numerous hamlets, each inhabited by one large family; that all these families, while getting their *rób* from the strips of wooded land which separated one field from another, and were treated as the exclusive property of the cultivators of those fields, used to resort to the unappropriated portion of the hill land of their village in common for their firewood; that when the increase of population and of cultivation made it convenient to break up one large village into several small ones, each hamlet became a separate village; but the inhabitants of all such villages still continued to make use of the unappropriated portions of the hill land in common, though it was included within the limits of one of them only. It will probably be very difficult indeed, or impossible to trace the history of all villages in this way; but I think we might make sufficiently accurate guesses as to which non-forest villages have a claim of this sort to be treated in respect of firewood privileges, in the same way as forest villages, to enable us to prepare for each State forest block a list of non-forest villages which may equitably be considered as specially attached to that block."

85. Mr. Lawrence also in answering the same question, as to whether former custom in Thána gives the inhabitants of non-forest villages a reasonable claim to enjoy the privileges in forest as regards grazing and collection of forest produce, as may be conceded to residents of forest villages, writes :—

"On the whole I do not. There are perhaps special cases of villages so situated as to have a reasonable claim to enjoy such privileges. Such villages are those actually bordering on large forests, which have been however included entirely within the limits of other villages. But the question is one for answer in the case of each village separately. In such cases it would generally be found that there would be ample room for the exercise of privileges both by the forest and non-forest villagers. In cases where there is not sufficient room, I do not believe it would be found that any reasonable claim on the part of non-forest villagers existed."

86. On the other hand we find that the Survey Settlement has in a few special cases recognized and recorded the custom of the cattle of one village to graze in the *gurcharan* land of another, and that it has failed to do so in other cases in which a similar custom is said to exist, or to have existed, until interrupted by recent regulations. It may of course be argued that where the custom has not been so recorded by the Survey, its continuance was considered unnecessary and was not provided for, and that if it has since continued, its continuance has been without authority, and would have been stopped at any time had complaints on the subject been preferred by the villagers, whose grazing land, set apart for their exclusive use, had been thus appropriated by outsiders. Again, the term non-forest village, as now applied to villages in which there are no forests as constituted under the Act, does not necessarily imply that there are no forest lands at all, still less that there are no pasture lands. In these villages also a considerable area of land aggregating for the whole of the Thána district 187,695 acres (or 1·6 acres per head of cattle), has been assigned for free grazing at the Survey. These assignments have been in no way interfered with, and are as a rule probably better *grass* lands than those available for the same purpose in the more densely wooded villages which have contributed lands to form forest blocks.

87. The subject however is one of much difficulty. It may be that claims of this nature were overlooked at the Survey. The custom where it exists is probably a very old one, due in most cases solely to a deficiency of pasturage within the limits of the village concerned. In recent years its exercise may have been on sufferance only; but its suppression might nevertheless be felt as a grievance. In other cases its continuance might seriously interfere with the provision to be made for the residents of the forest villages. With very few exceptions all the witnesses who have replied to question 13 of the circular questions (*vide* Volume III, pages 44 to 46) consider the distinction now drawn as regards privileges in State forests between forest and non-forest villages to be beneficial, and fear that by the withdrawal of such distinction the residents of forest villages would suffer and lose the interest they would otherwise have in the protection of their forests.

General conclusions.

Non-forest villagers to pay as a rule moderate fees for grazing in forests—special exceptions to this rule to be made if inquiry shows this to be necessary.

88. After careful consideration of all the evidence, we think the best course to follow will be to lay down the broad rule that the residents of non-forest villages should pay moderate fees for the privilege of grazing their cattle in forest lands, and at the same time to provide that any particular village which may claim free grazing in the forest of another village shall, if such claim proves after due inquiry to be justified by local circumstances and former long established custom, be treated as an exception to the rule, and considered in the matter of free grazing privileges to be one of the forest villages of that block in which the lands to which the claim refers, are now included.

89. A general recognition without special inquiry of the right of all non-forest villages to free grazing beyond their local limits is obviously out of the question. The total withdrawal of the distinction between forest and non-forest villages would, as Mr. Lawrence has justly remarked, "be tantamount to the grant of extensive privileges in many cases not even claimed." But we believe that it will be found reasonable in certain exceptional cases to admit the claims of particular non-forest villages to the same privilege as regards free grazing in particular forest blocks as are conceded to the forest villages. Where provision has already been made by the Survey for the continuance of such customs, the village should be treated, in respect of grazing, as a forest village, if the whole or any portion of the land assigned for free grazing is permanently

retained in forest, whether the Forest Settlement Officer has found the claim to grazing in the land assigned to it for that purpose in a neighbouring village to be a right or not. In all other cases where similar claims to exemption from the general rule laid down may be hereafter preferred, the *onus probandi* that the claim is a reasonable one should rest on the residents of the village who make it, and each case should be decided on its own merits.

Inquiry into claims of non-forest villages for free pasture in forests.

90. The officer entrusted with the duty of deciding such claims would first ascertain, what provision for free grazing was made in the claimants' village at the time of the Survey, and whether that provision was sufficient. As insufficiency of pasturage for local agricultural wants is the only just basis for a claim to supply those wants free of payment beyond local limits, the officer making the inquiry, if satisfied that the assignments made at the Survey and still in force for the free pasture of the cattle of the claiming village, were reasonably sufficient having regard to the area under cultivation, should reject the claims irrespective of any evidence as to former custom. If on the other hand he finds that the area available for free grazing is insufficient, and there is good and clear evidence of a long established and notorious custom on the part of the residents of a village to take their cattle to graze in the *gurcharan* lands of any neighbouring village, he would recommend that the cattle of the claimant village should be allowed to graze free in the unclosed portions of the forest block, in which the land they formerly grazed on is included. The evidence as to former custom would naturally be greatly strengthened, if the revenue records or other reliable documents showed that the village claiming exemption and the village, in which are situated the lands which are the subject of the claim, were formerly one and the same village. The evidence as to custom would be further strengthened by the admission of the custom by the residents of the village in which it is claimed to have been exercised.

91. If the land to which the claim refers proves to have been excluded from forest, or if included provisionally to have been since disforested, no exemption from the general rule will be necessary. We have recommended that residents of forest villages shall have free grazing privileges in unclosed portions of the forest, whether the land contributed to the block consists of what was assigned for free grazing at the Survey or not, because we think it unadvisable to make two classes of forest villages, the one privileged and the other unprivileged. But we see no reason to give free grazing privileges in *forests* to the residents of any non-forest village, merely because *some* of the land of the village in which they claim free grazing has been incorporated in forest. It should be refused unless the particular areas or portions of the areas on which they formerly enjoyed free grazing have been included in forest. But if these areas are retained in forests, and the claim is otherwise admitted as reasonable, residents and cultivators of the claimant village should have the same privileges as regards forest grazing as those of other villages which have contributed land to the block. As far as we can judge, the number of villages which will thus be able to establish good claims to free grazing in forests, will form only a small proportion of the total number of non-forest villages in the district.

Fees for forest grazing to be paid by all residents and cultivators of non-forest villages unless specially exempted.

92. All residents and cultivators of non-forest villages should, unless specially exempted, as above provided, pay fees for each head of cattle they may be permitted to graze in the open compartments of the forest. But we would recommend that the fees levied on agricultural cattle, the *bonâ fide* property of residents of the district, should be lower than those levied on the cattle of professional graziers and other cattle which, though tended by residents of the district, are owned by persons residing beyond the limits of the district. The scale laid down in paragraph 6 of Government Resolution No. 7467 of 15th September 1885 is moderate and should, we think, be adopted for all agricultural cattle, the property of residents of the district, and not specially exempted. Under this scale the maximum annual rate is 4 annas for a buffalo, 3 annas for a cow or bullock, and one anna for a sheep or goat, Government reserving the right of imposing higher fees if found necessary.

Proposed scale.

Professional graziers.

93. Having now dealt with the claims of the agricultural population, including residents of both forest and non-forest villages we must consider whether any special arrangements are necessary in the interest of professional

Definition the term.

graziers, as distinguished from cultivators. We must first explain as precisely as we can what we mean by the term "professional graziers." A variety of definitions of the term have been suggested in the replies to the circular question "how would you draw the line between professional graziers and other cattle-owners?" (*vide* Volume III., pages 31 to 33). Some would presume a man to be a professional grazier if he is a member of any particular caste which habitually deals in cattle, such as Dhangars, Chárans, Vanjáris, Lamáns, Gavlis, Khiláris, &c. Others, without respect to castes, would class as professional graziers all whose *primary* occupation is the keeping of cattle for profit. We concur with the latter, and in making suggestions as to the arrangements necessary for the wants of professional graziers, we include in that term all persons, whatever their caste, or religion, who are *principally* dependent for their livelihood on the profit they derive from cattle or sheep, whether their own property, or tended by them for profit for other persons. We consider a man to be a professional grazier, whether he holds land in the district or not, if his primary occupation be dealing in cattle. Conversely we do not consider a cultivator who keeps a cow, buffalo, or goat and sells the milk, to be a professional grazier, so long as his chief means of livelihood are derived from agriculture. No precise definition, however, covering all cases can possibly be formulated, and if doubts arise each case must be decided on its own merits. As pointed out by some of the officers in reply to circular question 10, there is no practical difficulty in deciding such cases, as the distinction is well known by the villagers themselves.

94. No complaints of professional graziers, as a class distinct from other residents of the district, have been made in any of the memorials submitted through the Thána Association. In the printed memorial, however, submitted by Mr. Chintáman Sakhárám Karandikar and three other residents of Thána it is stated under the head of grievances, that "in former times the milk selling classes of the community such as the Dhangars and Gavlis used to get free pasturage from wheresoever they pleased, and a number of cattle could, therefore, be fed; so that most of the necessaries of a Hindu subject's daily life such as butter milk, clarified butter and so on, were supplied by these classes to neighbouring villages and also to distant towns in abundance and at comparatively cheaper rates." The price of milk and its bye-products has no doubt, like that of other commodities, risen within the last thirty years; but we must take exception to the accuracy of the statement that Dhangars and Gavlis got free grazing wheresoever they pleased. We know on the contrary that under the Marátha Government grazing fees were levied from them and that their industry was further laid under contribution to the public revenue by the levy of a tax on the sale of clarified butter. These Memorialists adduce no evidence in support of their statement, and themselves recommend "that professional graziers such as Dhangars should *not* be allowed to graze their cattle in the public forest without payment of a small fee, say annas four per year, per head of cattle, payable to the *talátis* or other village officers."

95. Only one witness of this class was called by the Thána Association. We quote the following extracts from his evidence.—"We graze in the forest when the auction has been held, and also in the other village lands outside. We pay the contractor a fixed lump sum. * * We graze except in portions which the contractor keeps for grass. * * When the forest grazing was not auctioned we paid a fee to Government. What we ask for is that the grazing should not be auctioned, but that Government should let us graze as before, paying fees." It is clear from this that what grievances the Dhangars have in the matter of grazing are due, not to the levy of fees by Government, but to the sale of grazing lands by auction to contractors, a practice which has already been condemned and discontinued under the orders of September 1885.

Recommendations.

96. The subject has been very fully discussed in all its bearings in the replies to the circular questions (*vide* Volume III., pages 28 to 33). We recommend that fees be levied on all cattle kept by professional graziers, whether landholders or not, which may be admitted to graze either in forests or in other waste lands excluded from forests. As it would be almost impossible in the case of such graziers holding and cultivating land to separate the cattle required and used for field work from the rest of their herds, we do not recommend any

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exemption on these grounds. Nor do we think any distinction should be made as regards liability to pay fees for all grazing between professional graziers who are permanent residents in a village and others who are nomadic in their habits. We are also of opinion that as far as possible the cattle of professional graziers should be excluded from lands other than forests set apart for the free grazing of village cattle.

97. That Government has the power to exclude the cattle of professional graziers from village pasture lands, is clear from the judgment of the High Court in the case of Bál Pátil, Khand Pátil and three others *vs.* the Collector of Thána. The plaintiffs, Chárans by caste, claimed the right to graze their cattle in all village grazing grounds of the Thána District. The Assistant Judge and Judge decided in the plaintiff's favour. On appeal the High Court reversed the decisions of the lower Courts and made the following remarks :—

"The plaintiff alleges himself to be a villager of Velukh in the district of Thána, and in virtue thereof by his plaint prays that it may be declared (*inter alia*) not only that he has a right to graze his cattle within the limits of Velukh but also within the limits of any other village in the district of Thána. The claim to graze his cattle in villages other than Velukh is on the very face of it preposterous, and on scrutinizing his claim to graze his cattle in the village grazing ground of Velukh, we perceive that it is quite as ill-founded as his alleged right so to utilize the grazing commons in the other villages of the Thána district. It is admitted that he is not the owner of a single square foot of ground in Velukh, but it appears that he has erected a hut on public ground belonging to that village, where he sojourns for a few months, while his cattle are engaged in exhausting the grass set apart for the real villagers. Bombay Act I of 1865, Section 32, enacts that the land thereby authorized to be set apart for free pasturage for the village cattle "and for certain other purposes therein specified" shall not be otherwise appropriated without the sanction of the Revenue Commissioner. It is perfectly absurd to suppose that the term "village cattle" includes the cattle of any or every roving grazier who may choose to squat for a few months on the lands set apart for the villagers. And the Act does not vest the right of sanctioning such a division of the village grazing ground, in the villagers themselves, but in the Revenue Commissioner, whose consent, it is not pretended, has been obtained by the plaintiff. So far from condemning the Collector for his intervention we think that his conduct was praiseworthy in putting an end to such abuses as appear to have grown up in his Collectorate, and in insisting upon the preservation of the village grazing grounds or the Government forests for purposes for which they are properly reserved. We deem the suit of the plaintiff to be characterised by no ordinary effrontery, and we reverse the decrees of the court below with costs of suit to both appeals which must be paid by plaintiff to defendant."

Fees on cattle of professional graziers.

98. The fees charged for the cattle of professional graziers should ordinarily be higher than those charged for the agricultural cattle of the non-forest villages when admitted to graze in forests. They should, as contemplated in paragraph 9 of Government Resolution No. 7467 of 15th September 1885, be fixed on commercial principles, according to the value of the grazing in different localities. No fixed scale of fees can, therefore, be laid down.

Fees to be charged for cattle, the property of persons residing (1) beyond the limits of the district, and (2) in non-forest villages tended for wage by residents of forest villages.

99. The evidence shows that it is a common custom amongst cattle-owners in Bombay and elsewhere beyond the limits of the Thána district to send their cattle to parts of that district where good pasturage is known to be available and to pay some resident cultivators to look after them. The people who tend these cattle are not necessarily professional graziers. But we think the fees charged for these cattle, which through the agency of the village officers there would be no difficulty in identifying, should be the same as those charged on cattle of professional graziers. Similarly agricultural cattle belonging to residents of non-forest villages and tended for wage by any other persons not being professional graziers should pay the same fees for grazing in forests as all other agricultural cattle belonging to residents of the district and not specially exempted from payment of fees.

Regulation of fee grazing.

100. It will always be necessary to take care in admitting cattle on payment of fees to graze in unclosed forest areas, that the interests of those entitled to free

grazing in the same areas should not suffer. The number of cattle admitted to free grazing in any block should be limited in due proportion to the pasturage available and the number of animals exempted from fees. In making such arrangements, when the area available is insufficient for all the cattle for whom admittance is sought, preference should be given to the cattle of forest villages, and non-forest villages specially exempted from payment of fees. Applications for admission of cattle to forests on payment of fees by cultivators of non-forest villages should also have priority over similar applications from professional graziers and persons tending cattle not their own property for wage. We would accordingly make it a rule that permission must be got from the Forest Department by all persons who are liable to pay grazing fees before sending their cattle to graze in any forest areas. All passes for grazing on payment of fees should specify, in addition to other necessary particulars, the number of cattle for which fees are paid, the rate and amount of fees, the areas in which the pass will secure admission, and the period for which it is available. No pass for fee grazing issued in one *táluka* should be available beyond the limits of that *táluka*; but if necessary permission might be given without payment of extra fees to move cattle from one forest block to another within the same *táluka*.

Management of free grazing lands excluded from forests.

101. Subject to any rules which may be framed under Section 44, Land Revenue Code, for the preservation of trees standing in them, all lands assigned for free grazing at the Survey and excluded from forests should be left entirely to the care of the village communities. It may perhaps hereafter be possible to improve the grass supply in such areas by judicious treatment. Various suggestions under this head will be found in the replies to circular question 7 (*vide* Volume III., pages 21 to 23). But without the full and intelligent co-operation of the villagers themselves no such improvement is possible. We would therefore deprecate the application of any rules to these lands involving either absolute closure of any portion for a time, or exclusion of cattle for any particular season, without the consent of the people for whose ultimate benefit the rules are intended.

102. In concluding this portion of our report we may sum up our recommendations as follows :—

Summary of recommendations.

(1). That the residents and cultivators (whether residents or not) of all villages in the Thána and Kolába districts from which waste land of any description has been taken in forming forest blocks, shall be allowed to graze their cattle free, in all parts of the forest block, whether within or without the limits of their own villlage, which are not closed for purposes of forest conservancy.

(2). That though as a general principle it is right to limit the number of cattle to be allowed *free* grazing in forests to those animals actually required and maintained for agricultural work, the special circumstances of Thána and Kolába make it, for reasons explained, unnecessary and inexpedient to impose any such limit at present in that district: but that Government should reserve the right to impose such a limit hereafter, should it be found that the privilege is being abused, and that cultivators are keeping a number of cattle far in excess of their agricultural needs.

(3). That if such limit to the number of cattle allowed free grazing is hereafter imposed, it should be fixed in due proportion to the area cultivated by each individual: that the term agricultural cattle should be interpreted liberally so as to include, in addition to the stock actually needed for field work, a fair proportion of breeding and immature animals, and milch cattle, as also animals owned and kept for domestic use by persons, who though not themselves actually holding and cultivating land, render useful service to the village communities: and that in fixing such a limit in the Thána and Kolába districts, if it be hereafter considered necessary, special regard be had to the great value of cowdung as a material for ash manure.

(4). That while cattle should be rigidly excluded from the closed compartments of forest blocks all the year round, no close season should be fixed within which cattle entitled to free grazing should be excluded from other portions of the forests.

(5). That no hard and fast rule can be laid down as to the proportion of each forest block which can at any given time be closed for purposes of forest conservancy: but that this matter must be settled for each block separately according to local circumstances and the exigencies of working plans: that while in the wilder and more thinly populated parts of the district it may be practicable to close against grazing a large proportion, in some cases even entire forest blocks, no larger area should be closed in more extensively cultivated and thickly populated tracts than is strictly necessary for the preservation of the forests: that in forests thus situated, only those areas should be closed, pending preparation of complete working plans, where planting operations are in progress, or where owing to recent fellings the admission of cattle would cause injury to young trees: and that all working plans involving closure of grazing areas in rotation should before final sanction be submitted to the Collector of the district, that he may satisfy himself that the area left open will suffice for the reasonable grazing wants of the villages dependent on it, and if he is not so satisfied, procure such modifications in the proposals as may be necessary.

(6). That as provided in paragraph 1 of Government Resolution No. 7467 of the 15th September 1885 the practice of annual auctions of grass and grazing in forests be discontinued, except in the case of really valuable *kurans*, and that this rule be applied to the closed as well as the unclosed portions of forests, and that forest villagers be allowed the exclusive privilege of cutting and removing grass from the closed portions of forest for their own use either as fodder for cattle, or material for ash manure.

(7). That all owners of cattle other than residents and cultivators of villages which have contributed land to forests, shall as a rule pay moderate fees for the privilege of grazing in forests, but that where provision has been made at the Survey for the residents of one village to graze their cattle free in the *gurcharan* land of another village, and any portion of the land so assigned has been included in any forest block, the residents of the former (non-forest) village should have the same privileges, as regards free grazing in the unclosed portion of the block as are given to the residents of the latter (forest) village.

(8). That, even should no such provision have been made at the Survey for the cattle of one village, now a non-forest village, to graze free in the *gurcharan* lands of another village, now a forest village, claims of this nature founded on the insufficiency of pasturage within local limits and former long established custom should be inquired into, and that if such claims are admitted, and the area or any portion of the area to which the claims relate is permanently retained in forests, the residents and cultivators of the claiming village should be allowed to graze their cattle free in the unclosed portion of the block, in which any part of the land they formerly used for this purpose has been included.

(9). That the fees to be charged for the grazing in forests of all agricultural cattle, the *bonâ fide* property of residents of the district, and not exempted as above provided, be as laid down in paragraph 6 of Government Resolution No. 7467 of the 15th September 1885, *viz.*, 4 annas for a buffalo, 3 annas for a bullock or cow, and one anna for a sheep or goat if admitted, Government reserving the right to impose higher fees if found necessary.

(10). That all persons of whatever caste or religion who are *principally* dependent for their livelihood on the profit they derive from cattle or sheep, whether their own property, or tended by them for other persons for profit, be considered to be professional graziers.

(11). That all cattle of all professional graziers, whether permanent residents of the district or not, pay fees for grazing, whether in forests or in other waste lands excluded from forests, and that these fees, which should ordinarily be higher than those charged for the grazing in forests of agricultural cattle belonging to residents of the district not entitled to exemption, be fixed according to the value of the grazing made available.

(12). That as a rule the cattle of professional graziers should be excluded, even on payment of fees, from lands set apart for the free grazing of village cattle and not included in forest.

(13). That all cattle belonging to persons residing in Bombay and elsewhere beyond the limits of the Thána district, and tended for wage by residents of the district, whether professional graziers or not, be charged the same fees for grazing in forests or other waste lands excluded from forests, as if they were the property of professional graziers, and that agricultural cattle belonging to residents of non-forest villages and similarly tended for wage by any other persons not being professional graziers, be charged the same fees for grazing in forests as other agricultural cattle of the district not specially exempted from the payment of fees.

(14). That the number of cattle admitted to graze in forests on payment of fees be limited in due proportion to the available pasturage, and the number of cattle entitled to free grazing in the same area: that when the available pasturage is insufficient for the number of cattle for whom admittance is sought either free or on payment of fees, provision shall first be made for those entitled to free grazing, next for the agricultural cattle of the district not entitled to free grazing, and lastly for the cattle of professional graziers and non-resident owners tended by residents of the district.

(15). That it be made a rule that all persons requiring grazing in forests on payment of fees shall obtain the necessary permission of the Forest Department before sending their cattle to graze in such areas; that grazing passes shall specify, in addition to other necessary particulars, the number of cattle for which fees are paid, the rate and amount of fees, the area in which the pass will secure admission, and the period for which it is available: that passes for grazing on payment of fees issued in one *táluka* shall not be available beyond the limits of that *táluka*: but that, if necessary, permission should be given, without payment of extra fee, to move cattle from one block to another during the course of the season, within the same *táluka*.

(16). That subject to any rules in force under the Land Revenue Code for the preservation of trees therein, all lands assigned for the free grazing of village cattle and excluded from forests shall be left entirely to the care of the village communities, and that no measures for improving the grass supply in such lands, involving the closure of any portion of the area, or the exclusion of cattle at particular seasons of the year, shall be undertaken without the full concurrence of the villagers concerned.

103. All recommendations made by us in the preceding paragraphs as regards Thána apply equally to the Kolába district.

CHAPTER IV.

ARRANGEMENTS FOR LOCAL SUPPLY.

SECTION II.

Timber, Firewood and Bamboos.

Chapter IV.

SECTION II, TIMBER, FIREWOOD AND BAMBOOS.

The forest policy of Government.

The history of Forest administration in the North Konkan districts shows that the increasing importance attached by Government to conservancy in recent years has led, as a necessary consequence, to the gradual contraction of local privileges, by the inclusion in forests of areas formerly assigned as village reserves and communal grazing lands, and by the prohibition of many acts formerly permitted in those areas as well as the lands, set aside at different times as Imperial reserves. The policy of Government, as shown by word and deed, has been to assert the necessity of guarding the valuable forests committed to their care in the best interests of the public at large, to enforce whatever restrictions and regulations appear necessary to secure this object, while at the same time making due provision that the local residents, although no longer allowed to help themselves at their own free will to whatever forest produce they may choose to take, shall have whatever supplies they may need for their own consumption placed within their reach according to their means and convenience.

Popular complaints.

2. There can be no question as to the wisdom of this policy as thus stated. The complaint however is that in giving effect to it the interests and convenience of the local population have been unduly subordinated to other less important considerations; that the provision made for local wants has been insufficient; that the fees levied on certain kinds of forest produce formerly obtained free have been so high as to make it impossible for the poorer classes to obtain them by legitimate means; that the restrictions imposed have been harassing and unnecessary; and that the general result has been demoralising.

3. This is the burden of all the complaints of the Memorialists on this head. It is sufficient for us to say here with reference to the forest rights asserted by the inhabitants both of Thána and Kolába that we consider that the exceptional conditions of these districts, as well as former recognized customs, give them a strong claim to liberal and considerate treatment in all matters affecting the distribution of forest produce for local supply. At the same time we can admit no claims to be reasonable, the exercise of which is in any way inconsistent with the paramount importance of maintaining the State forests of these districts as a source of permanent supply both for local and Imperial needs.

Forest demarcation. Disposal of waste lands.

4. In our remarks on the subject of grazing we have already fully discussed the position of Government as regards all waste lands. We have stated our opinion that the inclusion in forests of lands which have been assigned for special purposes at the Survey, or which have been otherwise appropriated from time to time to supply local wants, is in no way inconsistent with such previous assignments or appropriations, provided a reasonable equivalent is given by liberal forest regulations for all necessary privileges formerly enjoyed therein. We have fully recognized the fact that public interests require that a large proportion of the lands formerly allotted as village reserves and common grazing grounds shall be placed under systematic forest conservancy, and we believe that this important object can be more effectually and economically secured by bringing such lands under the management and control of the one department specially organized and trained for this purpose than in any other way.

Treatment of lands in which local privileges are conceded.

5. The comparative advantages of including lands in which privileges such as lopping trees for *ráb*, cutting inferior trees for building purposes and agricultural implements, collecting firewood, &c., are conceded in Protected or Reserved forests, or of placing them in charge of the Revenue Department and regulating the exercise of all privileges under rules under the Land Revenue Code, or of constituting them village forests under Chapter III. of the Forest Act, have been mooted in the first three circular questions of the Commission (*vide* Volume III., pages 1 to 13). The answers given to these questions disclose very different views as to the best course to be followed. The majority, however, are

generally in favour of the inclusion of such lands in forests on the ground that they require protection to ensure the permanence of the supply, and that such protection can be better entrusted to the Forest Department than any other agency. The principal objection urged against this course is that the people dislike it on account of the constant supervision and petty interference by forest subordinates which necessarily results from it.

6. The suggestion that such lands should be placed under the control of the Revenue Department finds few supporters, and the objections urged against this course are many and weighty. On the other hand opinions are divided as to the expediency of setting apart sufficient areas for local supply as village forests; but the sense of the majority seems to be against such a proposal. The Thána Forest Association strongly urges the necessity of creating communal forests to meet the requirements of all the villages in a *táluka*, and advises that such forests should be vested in the respective Táluka Local Boards, to be administered by them under the professional advice of the Forest Department. Such an arrangement may be feasible in future years where local circumstances make a separation of Imperial from communal forests possible, and when the Local Boards have become permanent and thoroughly representative institutions. But as yet local self-Government is in its infancy and it would, we think, be obviously premature to entrust duties of this onerous nature to the Boards, until experience has shown their capacity to satisfactorily conduct the more limited duties now imposed on them.

Vide Volume III., pages 152 and 153.

7. The truth is, however, that no hard and fast policy suitable to all localities and conditions can be laid down on such a subject. In some parts of the Konkan where there are extensive and valuable forests, and local wants are very limited, it may be possible and judicious to effect a complete separation of Imperial from local forests, to limit the former to large and compact blocks, and to exclude from them scattered areas of wooded land sufficient to supply all the reasonable wants of the local residents as regards wood and *ráb* materials. Such excluded areas might then with advantage be managed by the Revenue Department under liberal rules, with the co-operation of the village officers. This plan seems to us in any case to be better and simpler than constituting such areas 'village forests' according to the procedure laid down in the Act, though the practical result in either case be the same. Where local circumstances permit, it is desirable that forest demarcation should be effected on these principles, in order that there may be no necessity for the continuance in the State forests of any privileges which are incompatible with efficient conservancy.

8. On the other hand there are many parts of the Konkan where demarcation cannot be effected in this manner. As a special instance we may take the case of the Kalyán *táluka*. The forests in this tract are very limited, and their resources, owing to the constant drain on them, to supply the wants of a comparatively dense population, as well as the trade demands which their accessibility encourages, are already in danger of exhaustion. In this case the assignment of sufficient areas as communal forests to supply even the local demand for firewood would necessitate the sacrifice of all the State forests in the tract, under conditions which would afford but a very weak guarantee for the permanence of the supply.

9. The expediency, therefore, of separating Imperial from village forests seems to us to be a question which must of necessity be decided with regard to the local conditions of each tract. Speaking of the Thána District as a whole the conclusion is forced upon us that notwithstanding the principles of demarcation which found favour with the Forest Committees of 1863 and 1875, a complete separation, except perhaps in the wilder parts of Váda, Shahápur, Mokháda and Murbád, would be undesirable in the interests of the people themselves. Communal forests in the more thickly populated parts of the country, unless protected under such strict regulations as would make the distinction between them and Reserved forests one of name only, would be liable to rapid exhaustion, and the already contracted State forests would, in proportion to the area taken from them, be so much the less able to meet the increased demand on them.

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Demarcation of *tálukás* already settled should be maintained.

10. In dealing with the *ráb* question later on we shall have occasion to explain why we consider that, for the present at least, the demarcation of the Reserved forests as already effected and sanctioned in the settled *tálukás* should be maintained. For the same reasons we cannot now recommend the conversion of any of the Reserved forest area in those *tálukás* into village or communal timber and firewood reserves. In all these tracts except the Mokháda *peta* the area of village forests required to satisfy local demands for firewood would be so large as to leave little or no land worth preserving as State forest. In Mokháda there is no such difficulty, and by the demarcation effected there a sufficient area of wooded land to meet the very limited local demand has already, as far as we can judge, been excluded from forests.

11. We recognize, however, the possibility that it will be found necessary hereafter to disforest portions of the existing reserves in some *tálukás* to supplement the present allotments of *varkas* land for *ráb* purposes, where lopping for *ráb* has been long practised, and the necessity for preserving the fresh growth of trees in such areas from similar treatment will render a further continuance of the practice impossible without seriously injuring the forests. But while we are of opinion that the requirements of the cultivators as regards tree loppings for *ráb* can eventually be completely satisfied from other sources than the State forests, without giving up any considerable area of land which ought to be strictly protected, we believe it will be as a rule impossible to satisfy the local demand for timber and firewood in the same way. Whatever unassessed waste lands, however, are rejected in laying down the boundaries of the Reserved forests should of course be utilised as far as possible for this purpose, and privileges in them controlled by suitable rules under the Land Revenue Code similar to those now in force in the Thána District.* And in carrying out the demarcation of the *tálukás* which have still to be settled the desirability of providing for all local wants independently of State forests, as far as this can be done consistently with placing sufficient areas under strict conservancy for Imperial purposes, should, we think, be kept steadily in view.

* *Vide* Volume IV, pages 201 and 202.

Review of the different systems for local supply tried in past years.

12. Before recommending any detailed schemes for adequately supplying the wants of the resident agricultural population, as distinguished from trade demands, with due regard to the preservation of the forests, it is necessary that we should review at some length the working of the various measures which have been adopted in this behalf, especially in recent years, and point out whatever advantages and defects there may be in the existing arrangements. Many of the measures to which we shall have occasion to refer, have been tried and found wanting, and it is unlikely that any experiments which have already signally failed will be repeated. We do not wish to re-open unnecessarily questions which have been already decisively settled, or to further condemn schemes which experience has proved to be impracticable. It will be useful, however, to note the objects which these different measures were intended to fulfil, and when they have failed, to examine as far as possible the true causes of their failure. Without such examination it will be difficult to pronounce any opinion as to whether the complaints and objections of the Memorialists have had in all these cases a reasonable foundation, or whether they have been dictated solely by the desire to prove any system for local supply unworkable, other than the giving full liberty to all local residents to help themselves to all they want from the nearest jungles. It will be equally difficult for us to avoid the risk of courting similar failure for any new arrangements which may appear to promise good results, unless due account is taken of all the conditions which have made previous efforts in the same direction unsuccessful.

Fee system in force till 1858.

13. We need only briefly allude to the arrangements in force prior to 1882. They are matters of past history and as such have already been described in the Précis of correspondence furnished to us by Government. Under the old fee system in force up till about 1858 all persons, whether traders or local residents, had to pay certain fees on all wood passing through established posts or *nákás*, irrespective of its description or quality, while residents of the villages between whose limits and the public forests there were no such toll bars, procured all the wood they wanted free of payment by their own labour, subject

only to a general prohibition against cutting teak. This system, though disastrous in its results so far as forest conservancy was concerned, gave no ground for popular complaint. Nor was the liberty previously enjoyed by the local residents curtailed to an appreciable extent by any of the arrangements gradually introduced as the result of the recommendations of the Forest Committee of 1863. The principle then laid down was that the Imperial or specially Reserved forests should be completely separated from the village reserves or forests for local supply, and that the people, whose wants these latter forests were intended to provide for, should have free access to them and liberty to take from them for their own private use firewood and timber for building and agricultural purposes, subject to the strict reservation of seven of the more valuable kinds of trees.

Principles laid down by the Forest Committee of 1863.

14. The demarcation of Imperial and village reserves which followed, was gradually but never completely effected, and nowhere caused any violent changes in former usages. No attempt appears to have been made to carry out the further proposals of the Committee of 1863, as to the mode of supplying firewood to the inhabitants of coast and other villages having no fuel resources of their own. This class of the population had, subject to the payment of the customary fees levied at the *nákás*, hitherto had the privilege of cutting firewood in the forests. While recognizing their claim to be supplied on the terms previously enjoyed, it was thought unadvisable to allow them to continue to have access to the forests. It was proposed therefore as a more economical measure as regards future firewood resources that the requisite supply should be cut for them by the Forest Department and distributed departmentally on payment of a sum sufficient to cover the cost of cutting and the customary fee. It was further proposed that the demand of large towns where municipalities existed should be handed over to the Municipal Committees for distribution to local inhabitants on similar conditions. But as stated above these suggestions were never carried out.

Practical results of the demarcation which followed.

15. We need not detail the various orders and correspondence regarding local supply between 1863 and the passing of the Forest Act. A reference to the Précis furnished to the Commission will give any information on the subject which may be required. Many proposals were ventilated during this period, and occasional complaints were made by the residents of particular tracts that their privileges were restricted by particular orders. But the history of this period shows that the complaints which then attracted most notice were the protestations of a newly organized department against a system, or want of system, which rendered all efforts to conserve the forests futile, and a demarcation which made all the valuable forest lands on the lower slopes of the hill ranges village reserves, and left for Imperial forests only the bare and rocky slopes above, rather than popular demands for the removal of restrictions which no attempt had then been made to enforce in earnest.

Measures affecting local supply taken between 1863 and the passing of the Forest Act.

16. We must, however, note the orders passed in Government Resolution No. 1281 of the 12th March 1874 on the subject of privileges in second class reserves. They are important as drawing for the first time a clear and marked distinction between the privileges of residents of forest and non-forest villages irrespective of any former custom. These orders were as follows: "the privilege of cutting without permission unreserved descriptions of trees in second class reserves should be allowed only to rayats residing in the villages within which the reserves are situated and should be restricted to firewood, and those rayats may also be allowed to obtain whatever wood they may require for agricultural purposes or for the repair of their houses gratuitously, but on condition that the permission of the Forest Department be previously obtained." These orders, as might be expected, drew forth petitions from some inhabitants of non-forest villages. In disposing of such petitions it was observed (*vide* Précis paragraph 26, Volume IV., page 14):—

Distinction between forest and non-forest villages as regards privileges in second class reserves first drawn in 1874.

Consequent complaints of non-forest villagers.

"The existing orders are quite sufficiently liberal. People residing in forest villages are allowed firewood free and the poorer classes are allowed wood free of charge for agricultural purposes to a reasonable extent. People who live at a distance from forests cannot reasonably expect that Government should give them wood for nothing for their own use, still less to trade in, as many people in the Konkan are in the habit of doing."

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Proposals of the Forest Committee of 1875.

Views as to the claims of non-forest villagers.

17. The Committee of 1875 (*vide* Volume II., pages 368—372) which met shortly afterwards to report on the forest question, endorsed the general principles of forest demarcation and conservancy laid down in 1863. They considered "the present unsatisfactory state of affairs to be owing to want of care in the original demarcation and to the absence of an establishment of sufficient strength to protect the Government forest, to regulate the consumption of timber in village forests, and power to prohibit waste and consequent exhaustion of the forests." They considered the possibility of throwing open the second class forests to the inhabitants of other villages than those whose lands were included in them, but thought it impracticable. "Where they have hitherto enjoyed," they wrote, "the right to graze their cattle in the second class reserves we do not propose to restrict that right, and it will be the duty of the Forest Department to supply them with timber suited to agricultural implements and house-building; but if they are permitted to cut indiscriminately for *ráb* and firewood they will exhaust the jungle so rapidly that there will be none left for even the reserved villages. We do not think the public can justly complain of this restriction. In past years their villages were also covered with jungle, but they have exhausted it and they cannot now claim the jungle of other villages."

No suggestions however were made in this report as to the particular manner in which the firewood demand of these non-forest villages was to be met.

Practical results. First suggestion of the necessity of establishing depôts for local supply of building and agricultural wood.

18. The only immediate practical result of the recommendations of the Committee of 1875 was the appointment of a special officer to revise the previous demarcation. It is to be noted, however, that the idea of establishing depôts for supplying cultivators with wood for agricultural implements and rafters and beams for buildings was first suggested in this report. The then existing rules, under which wood for building and agricultural purposes was supplied, were declared to be unworkable on account of the delays involved in getting permission to cut, and it was suggested that depôts should be formed at convenient places where the necessary materials should be stored and distributed by the agency of the village officers.

19. The suggestion, however, was not then adopted. Nor did it find favour when the Commissioners in the following year, on being requested to draw up rules for simplifying the procedure in respect of free grants of wood for agricultural implements, again recommended the establishment of depôts for this purpose. The old rule of 1874, requiring forest villagers to get permission before cutting for farm implements, remained in force until Government Resolution No. 335 of 21st January 1880 cancelled all previous rules on the subject of free grants, and made it necessary that the sanction of Government should be obtained in each instance. It is very doubtful, however, whether the rule in question was ever seriously enforced, or that the inhabitants of non-forest villages, much less those of forest villages, ever sought permission before taking wood from the nearest jungles for ploughs or any other purpose.

Depôts for local supply first sanctioned in 1881.

20. It was not till the 13th December 1881 that Government finally approved of the principle of establishing depôts for local supply. In consequence of complaints of delay in supplying people with wood for agricultural purposes, the suggestion of the Collector of Thána for the formation of numerous depôts was then for the first time accepted. Tentative proposals were made in consequence and sanctioned in Government Resolution No. 587 of the 23rd January 1883. It was expected, as appears from the orders then issued, "that under the depôt system the requirements for fuel of most of the residents in villages which have no unclosed forests will be conveniently supplied." It was also understood that "departmental arrangements will be made for the supply from the depôts of wood for agricultural implements to cultivators who are not residents of forest villages, that the residents of forest villages will retain, subject to proper supervision, the privilege hitherto enjoyed by them in the unclosed forests of their villages, and that the arrangements then in force for the supply of timber to the public will be continued."

Conference of 1882.

21. Meanwhile a Conference of Revenue and Forest Officers had been assembled at Thána in October 1882. Their attention had been specially

directed to the subject of these depôts, but their report being for some reasons delayed, the orders of Government were not passed on it until the 18th May 1883, by which time Government had already, as before mentioned, approved of the Collector's suggestion to establish depôts for local supply and sanctioned the proposals made by him as a tentative measure.

Vide Volume IV., pages 88 to 101.

Recommendations as regards local supply.

22. The Committee of 1882 in their report* declared that the rule requiring previous permission to be got before taking wood for agricultural purposes had been practically ignored by the people, and again strongly urged the establishment of depôts for the local supply of wood of all kinds "as the only course that can be taken to ensure the protection of the forests and the convenience of the people." They went, however, further than the Committee of 1875, and urged that the firewood supply of villages lying outside forest limits should be provided by similar depôts. "The establishment of such depôts" they write "will in fact be the means of carrying out the purport of the orders of Government that the inhabitants of such villages should in future be provided for from cuttings to be made departmentally, and should not be allowed to resort in person to the forests."

Depôts to be of three kinds.

23. The depôts recommended by the Committee of 1882 were in fact of three kinds.—

(1) Depôts under Section 41 of the Forest Act (*i.e.* for the purposes mentioned in Rule XV. of the rules under the section quoted).

(2) Depôts for the supply of fuel, bamboos, *kárvi*, leaves and dead wood of all descriptions to be worked by contract.

(3) Depôts for the supply of wood for domestic and agricultural purposes.

To save establishment these depôts were intended to be combined as far as possible in the same places. As regards the second class for the supply of fuel, &c., the contractor was "to be bound to maintain at each depôt a supply of material sufficient for the local requirements of the tract to which the depôt was assigned, and to supply local wants at prices not exceeding by more than 50 per cent., the rates of his tender to Government." The fuel was to be supplied unrestrictedly to the public, but wood for building and agricultural implements was not to be given without a pass from the *mámlatdár*.

Working of the agricultural depôts, 1882-85

24. A full account of the working of the agricultural depôts, which were first established in both the forest divisions of Thána on the 1st December 1882 under very similar rules is given in Mr. Wilkins' evidence (*vide* Volume II., pages 263 to 265). The only difference that need be noted is that in South Thána wood for building and agricultural implements could not be had under the rules without a certificate of poverty from the *mámlatdár*, according to the advice of the Conference of 1882, while no such rule was enforced in the Northern Division. The object of requiring an applicant to produce a *mámlatdár's* order to the effect that he was too poor to be able to buy wood in the open market, was to prevent dealers from purchasing all the stock in the depôts at the low rates charged there, and selling them at a large profit either locally or in the Bombay market. This rule, however, was only in force for one year even in South Thána. It was cancelled on the recommendation of another Conference of Revenue and Forest Officers held at Thána in October 1883. At the same time the South Thána rule that any *bonâ fide* cultivator should be allowed to buy wood up to Rs. 10 in value in one year at any depôt was extended to the North Thána Division as well.

Orders to keep *ráb* materials for sale at agricultural depôts.

25. The depôts for wood for building and farm implements were maintained, with no changes in the rules except those mentioned above, for three years, when they were disestablished under the orders of Government in their Resolution No. 5880 of 20th July 1885. It was ordered, however, in Government Resolution No. 9443 of the 22nd December 1883 that in addition to the ordinary material kept for sale, fifty head-loads of tree loppings for *ráb* should be stored in each depôt for sale at a price representing 5 per cent. in excess of the actual cost of cutting and carriage. These rates varied, according to Mr. Wilkins' evidence, from 6 pies to 2 annas per load according to distance. We

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are not surprised to learn, therefore, that there was no demand for this *ráb* material, at prices which very little consideration will show to have been absolutely prohibitive.

Working of the depôts for local supply of fuel, *kárvi*, bamboos, &c., under the agency of contractors, 1882-83.

26. The depôts for the supply of fuel, *kárvi*, bamboos, &c., through the agency of contractors, had a still shorter existence. After only one year's trial they were unanimously pronounced a complete failure by the Forest Conference of 1883 and abandoned in consequence. The exact terms of the contract given in the North Division may be gathered from Exhibit No. 97 (*vide* Volume II., pages 179 to 181). This agreement gives the contractors the exclusive right of removing dead wood from the Government forests, and selling it in depôts to be established at places approved by the Divisional Forest Officer under conditions specified, and at rates to be fixed from time to time with the concurrence of the said officer and the licensee. By clause 5, however, it is provided that "the licensee shall not remove any wood except of the reserved kinds from *gurcharan* or forest that has been specially assigned for the use of the villagers, and nothing in the license shall entitle the licensee to interfere with the privilege enjoyed by villagers of collecting for their own domestic use dead wood from *gurcharan* or forest, as aforesaid, within the limits of their respective villages."

Terms of the contract.

Consequent withdrawal of privilege of retail sale of head-loads formerly enjoyed by wild tribes.

27. As a necessary consequence of the conditions of this contract the privilege of retail sale of head-loads of dead-wood collected by the wild tribes ceased. They were expected instead to seek employment under the contractor, while their former customers were to make all their purchases of firewood from the depôts.

Evidence as to inconvenience caused by the arrangements.

Condemnation of the system by the Conference of 1883.

Mr. Lakshman Náráyan Sádhle, Secretary to the Bassein Branch of the Thána Forest Association, has in his evidence before the Commission (*vide* Volume II, pages 110—112) given a detailed account of the confusion which arose under this new system for fuel supply. In the absence of any rebutting evidence we must assume that this account is substantially correct. The system was condemned by the Conference of 1883 "as radically bad in that while the contractors cheated Government and injured the forests they oppressed the public and simply enriched themselves."

Recommendations of the Conference of 1883.

Retention of the depôts for building and agricultural timber. Permit system introduced for firewood and bamboos.

28. In supersession of previous arrangements for firewood supply the Conference of 1883 recommended the adoption of the system already in force in the Salsette *táluka*, under which any one might remove head-loads of fallen dead-wood from the forests on payment of fees at appointed *náká's*, the receipt for the payment of such fees serving the purpose of a pass and freeing the bearers from any further inquiry. They also recommended that cart-loads of dead-wood might be similarly removed after first paying a fee of Re. 1 per each ordinary cart and obtaining the necessary permit. This arrangement was sanctioned by Government as an experimental measure. For the supply of bamboos the same system was proposed as for firewood, while the depôts were maintained for building and agricultural wood.

Existing arrangements for local supply in the Thána district.

29. We have given above a brief history of the various general orders regarding local supply up to the time of the meeting of the Conference of 1883. We proceed to describe the arrangements now in force, as sanctioned by the Resolutions passed on the settlement reports of the different *tálukás* from 1883 to 1885, and other special Resolutions affecting local supply passed during the same period. These orders have been summarised in the circular issued by the Collector of Thána, dated 30th October 1885 (*vide* Volume IV., pages 191 to 196). Taken as a whole they apply only to the *tálukás* of which the demarcation and settlement has been already completed; but so far as they regulate the manner in which timber, firewood and bamboos are supplied to the local population, they are of general application.

Supply of firewood to forest villagers. Privilege of removing dead wood.

30. The inhabitants of villages which have contributed land to the formation of any forest block may, under the present rules, remove for *boná fide* home consumption without payment any dead-wood they may find in any forest areas. If the privilege, however, is sought to be exercised in closed portions of Reserved forests the previous permission of the Divisional Forest Officer is necessary. This privilege is also limited by prohibitions against removing *khair*

wood in any shape as fuel and splitting up logs of teak, blackwood or *tivas*. The wild tribes, except in Salsette, have, in addition to the ordinary privileges of forest villagers, the additional privilege of *selling* dead wood, collected by them in any forests.

Arrangements for supply of firewood to non-forest villagers under permits.

31. The dead-wood privilege is by the existing rules expressly limited to the inhabitants of forest villages. All other local residents must obtain whatever supplies they require from the forests by purchase either from the wild tribes or the Forest Department. Under present arrangements permits can be obtained for the removal of firewood from forests for local consumption on payment of a fee of 8 annas for a cart of the ordinary size and Re. 1 for the large cart in use at Bassein, called locally the Mánikpuri cart. As a result of a conference of Revenue and Forest Officers in 1883 these fees were then doubled. They have since, however, been reduced to the former rates under the authority of Government Resolution No. 5880 of the 20th July 1885. The benefit of the reduced rates, however, is "only to be enjoyed by persons residing in the *táluka* and taking the material under the permit system for their own *bonâ fide* consumption for agricultural purposes or for a local industry." In order to give further facilities to the inhabitants of the non-forest villages for obtaining firewood it is ordered in paragraph 4 of the same Resolution that timely notice shall be given whenever cuttings are being made in the Government forests to enable such persons to buy thus any wood they may require for fuel or other purposes, while the Revenue Officers are at the same time enjoined to bring any shortcomings in the supply to notice.

Increase of permit fees for firewood in 1883. Subsequent reduction in 1885.

Special arrangements for supply of firewood to the sugar-boilers of Bassein and Máhim.

32. Special arrangements have however been made from time to time for supplying the sugar-boilers of Bassein with firewood for their furnaces (*vide* Mr. Wilkins' evidence, Volume II., pages 266 and 267). The annual demand for this purpose is estimated at about 10,000 candies. Fellings up to this amount in the nearest forests to the gardens have been made during the past two seasons. In 1884-85, when a fee of Rs. 2 per large cart holding from 2 to 2½ candies was charged, very little of the wood so cut was taken by the sugar-boilers. In the following year 1885-86, with a reduced fee of Rs. 1-8-0 per large cart, rather more than half the total quantity felled was removed. Mr. Wilkins' account of the arrangements made and the evidence of Thána Witness No. 58 (*vide* Volume II., pages 116 and 117) show that, for reasons which we need not discuss here, the results of these attempts to make special provision for the requirements of this industry have not, despite all the trouble taken, been so satisfactory as could be wished.

Local supply of timber.

33. Under present regulations all timber required for local consumption for house-building, farm implements, wells or any other purpose must be purchased at the periodical auction sales of such material conducted by the Forest Department wherever fellings may take place. A special exception, however, is made in favour of the wild tribes, who are, in consideration of making themselves generally useful, allowed to take inferior wood from the forests for the construction and repairs of their huts.

Retail auctions of annual fellings for local supply to take the place of the agricultural depôts abolished in 1885.

34. The agricultural depôts introduced experimentally in 1882, and to which we shall have occasion to refer again later on, were discontinued under the orders of Government in 1885, in the hope that annual fellings and sales of wood in suitable places by retail auctions would enable the local residents to obtain their supplies more conveniently and economically than under the fixed depôt system. Mr. Wilkins, on being asked by the Commission how far this new plan has succeeded, has stated (*vide* Volume II, page 268):—

Results of new system introduced in the season of 1885-86.

"In North Thána we had large departmental fellings, and sold the material by retail auction. There were two fellings in Bassein, about 8 in Máhim, 3 in Dahánu, 1 in Sálsette, and 4 in Umbargáv on this system. The material was stacked in small heaps, and put up lot by lot. This was intended to supply both the trade and the local inhabitants, and especially the coast population. No distinction was made between traders and local residents as regards terms. The auctions were open to all alike. A great deal of the wood was bought by petty dealers, who formerly, when this material was sold in large lots, were unable to bid. Some agriculturists bought at these sales. In all about 1,000 individuals purchased wood at the auctions. The wild tribes, in consideration of work done, such as burning fire paths, collecting and planting seeds, were allowed to remove inferior wood for their houses from the forests. They were paid full wages for any regular work. The grant of wood was a sort of return for their making themselves generally useful."

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We have no precise information as to the results of similar sales in South Thána; but we gather from Mr. Mádan's evidence (*vidè* Volume II., page 44), that it was arranged to have departmental fellings in every beat in that Division, to take the place of the agricultural depôts, according to the estimated local demand, the material felled to be sold by retail auction without reserve to the *bonâ fide* residents of that beat, and that it was also intended to sell the material of one of the ordinary departmental teak fellings by retail auction to meet local wants, and especially the wants of the residents of towns.

Arrangements for local supply of bamboos under permits.

35. Bamboos of all the varieties which grow in the Thána forests are now supplied for *bonâ fide* local consumption under the permit system at fixed rates per cart or head-load according to description. The fees for bamboos as for firewood were very considerably raised in 1883, but their subsequent reduction to the rates previously in force has left the Memorialists little or no grounds of complaint on this score. It was unfortunate that owing to some confusion between the species of bamboo locally called *velu* and much in demand by the gardeners of the coast districts for platforms and standards for betel-vine cultivation, and another and larger species called *manvel*, the fees on the former were raised in 1883 from 8 annas a cart-load holding some 250 or more canes to Rs. 3 a hundred or Rs. 7-8-0 per cart, that is fifteen times the former price! This error has however since been rectified.

Existing arrangements in the Kolába District for the supply of timber and firewood.

36. We are informed by Colonel Peyton that wood for agricultural and building purposes is still supplied in the Kolába District to local residents by means of agricultural depôts. We have no evidence, however, as to the working of these depôts in Kolába, but we understand that the demand for the wood brought to them is very limited. Timber is also obtained by local residents, (1) by purchasing Government teak trees in private holdings at a rate of from 8 to 12 annas a tree, according to size and quality, and (2) from Government forests on the permit system as obtaining in North Kánara, *i e.*, by paying seigniorage fees of Rs. 6 and Rs. 4 per candy of squared teak and trimmed poles respectively, and half the above fees for jungle wood of the same description. Firewood is obtained from the forests for local use either on payment of a fee of Re. 1 per cart and from 4 to 6 pies per head-load, the permit only authorising the collection of dead wood, or by purchase of head-loads of similar wood from the wild tribes who are allowed to collect it free of payment. Bamboos do not grow in any of the Kolába forests.

Defects of the present system for local supply of firewood.

37. The features of the present system which are, in our opinion, most open to objection, are (1) the privilege enjoyed by forest villagers and wild tribes of removing fallen dead wood from forests, and (2) the removal of firewood under the permit system, that is, the giving permission to any one who requires firewood to go and *collect it for himself* on payment of a certain fee. We consider the continuance of either or both these practices to be totally incompatible with a proper working of the forests, so as to ensure the maximum annual yield consistent with the permanency of the supply. Nor do we think that the convenience of the people necessitates any such arrangements. All the firewood required for local consumption can, as we shall endeavour to show later on, be distributed from the annual compartment fellings in a way equally convenient to the people and far less objectionable as regards forest management and control.

Privilege of collecting dead-wood enjoyed by wild-tribes and forest villagers. Inducements to manufacture dead-wood to increase the very limited supply available.

38. We have no hesitation in declaring that the dead wood privilege as now defined is a delusion. It is well known that under proper conservancy there ought really to be no dead wood at all. In the larger forest blocks remote from large towns and markets and hitherto unworked, there may be, no doubt, as Mr. Wilkins states, a sufficient supply of naturally formed deadwood to meet the firewood demand of the resident villagers, but even in such cases the legitimate supply must be very quickly exhausted by the wild tribes who have and exercise the privilege of collecting it and carrying it for sale wherever they can find a market. And the small supply now available in such forests will be reduced to nothing, or next to nothing, when eventually brought under a regular working plan system. The inevitable result everywhere of the deficiency of naturally formed dead wood is the manufacture of it by firing the forests, girdling trees, and ruthlessly destroying young shoots and saplings. The Memorialists' witnesses, as the evidence clearly shows, make little or no pretence of denying

the prevalence of these practices, but simply plead necessity. Nothing in our opinion can be more fatal to the preservation of the forests than the continuance of such abuses. Without an amount of supervision, which, except in very special cases, would be out of the question, such abuses seem to us to be impossible to prevent, as long as the nominal privilege of collecting dead wood is allowed to be exercised.

Permit system for firewood supply open to similar abuses.

39. The permit system for the collection of firewood, leading, as it must, if carried out on a large scale, to irregular exploitation of the forests under insufficient supervision, is almost equally objectionable. For special products like bamboos this system may be very suitable, but as a means of obtaining firewood it is open to grave abuses. Mr. Mádan's evidence on this point is very instructive. He describes the permit system for supplying firewood in Thána as follows :—

"*Nákás* are established at all railway stations and depôts, and the *nákedárs* issue permits in a printed form to all applicants for the removal of dead wood for fuel on payment of a fee of Re. 1 per cart-load. In Mokháda, where there are no *nákedárs*, the round guards issue the permits. These permits allow the holders to go to specified forests and collect the specified quantity of material within a specified time. The time allowed is regulated according to the distance of the forest from the *náka ;* two days are allowed for collection of wood and one day for every ten miles to be travelled to and fro. On returning to the *náka* with the firewood, the permit-holder exchanges the permit for a pass under Section 41 of the Indian Forest Act, which covers the export of the material either by road, rail or water. This is called the *jaláu kolpát* system. This system has been abandoned this season. While it was in force traders availed themselves of it largely, but the local population scarcely at all. This system led to abuses. In order to create a sufficient supply of dead wood, traders got their employés to manufacture dead wood by girdling trees and setting fire to forests. It led to the corruption of subordinates, permit-holders with the connivance of the subordinates removing timber *kolpát* instead of firewood, and removing a larger quantity of fuel than was paid for. A good deal of green wood was also cut and carted away under this system. Last year I got a *nákedár* dismissed for allowing timber to pass under the cover of a firewood permit. The inquiry showed that the wood passed the *náka* at night. Frauds of this kind can occur without the connivance of the *nákedárs.* There are heaps of wood at railway stations ; a permit-holder can bring a load at night, mix it up with the heap and return again to the forest and bring wood a second time under the same permit, and so on. Another source of fraud is this : A permit-holder goes to the jungle, and as long as he is in the jungle he is protected by his permit ; directly he leaves the jungle, he can assert that the material in his possession has been obtained from occupied lands ; and as no passes are required to cover the latter, and proof as to the source from which the material has been got is not forthcoming, he can deposit his load at the station and return again to the jungle on the same permit, and repeat the operation so long as the time specified in the permit will allow him. If passes for removal of wood from *málki* numbers were made compulsory, this particular kind of fraud would be avoided. The new system adopted from this year is as follows :—The trade is supplied by the auction sale of standing trees in selected compartments. This year these cuttings are mostly limited in my charge to the forest in the bed of what will be Tánsa Lake in Shéhápur. For local supply of firewood, bamboos, thorns and *kárvi*, the permit system is kept up at the rates specified in the printed circular of 30th October last (*vide* Exhibit No. 39, Volume II., page 146)."

Other abuses incidental to the permit system.

Necessity for amending section 41 of the Forest Act.

40. One of the chief abuses to which the system is open, *viz.*, the collecting in successive trips of double or treble the quantity entered in the permit and passing off the excess as the produce of occupied lands, would, as Mr. Mádan points out, be prevented by the amendment of Section 41 of the Forest Act, so as to bring such produce under control, and this amendment is for other reasons also, as we shall show in another part of this report, very desirable. It will be seen from the above that the permit system has now very wisely been abandoned in meeting trade demands, though it has been retained as one of the means of supplying local wants. It seems, however, equally open to abuse in either case.

Inconvenience of permit system to local residents.

41. Owing moreover to the trouble and delay in getting the necessary permits and passes, the system is by no means so convenient for local residents as its retention for this purpose would seem to imply. As a forcible illustration of the trouble to which cultivators may occasionally be put in getting permits for firewood, we may quote an extract from the evidence of Mr. Ardesar Dorábji, Witness No. 38 (*vide* Volume II., pages 80-81).

"There are forest *nákás* established along the line of the railway. The village of Bhilád has such a *náka*. It is the nearest *náka* to Kochái where I have my farm. It is about 10 miles from Kochái. Last year, when I had to get some forest materials by permit from the adjoining forest of Anvir, I had to obtain the permit from the *nákedár* to get the materials from the forest, take them to the *náka*, and then to remove them to my village.

I had to return the permit finally to the *náka*, thus involving three trips to the *náka* for obtaining materials which are to be had within two miles of where I live."

It may of course be said that this is an exceptional case; but unless forest *nákás* are more numerous than they now are in the inland tracts remote from bunders and railway stations, such cases cannot be very uncommon.

Opinions of officers as to the merits of different systems for local supply.

42. In our circular questions Nos. 27 to 30 (*vide* Volume III., pages 77 to 84) we have invited full discussion as to all possible methods for distributing forest produce for local supply and have further asked officers having local experience of the Thána District to give their opinions on the different systems tried there, to state whether they think each system has had a fair trial, or to be capable of improvement, and to point out if possible the causes of failure in each case. The answers on this as on most of the subjects on which opinions have been given disclose very conflicting views. Some officers condemn the permit system unreservedly as unsuitable for the distribution of any forest produce. Others recommend it for the supply of firewood and other minor forest produce, but prefer the plan of departmental fellings or depôts for superior timber, while others again recommend it as the best means of supplying all local wants. After full consideration we are compelled to state that we think it unsuitable for any other produce than bamboos.

Conclusion that the permit system is unsuitable for the supply of any forest produce except bamboos.

Agricultural depôts—causes of failure.

Popular complaints.

43. Opinions are also divided on the subject of the agricultural depôt system. A great deal of evidence has been given by the Memorialists to show that these depôts failed to meet the convenience of the people and that the material provided in them was insufficient, costly and unsuitable. Many of these complaints appear frivolous, but a few are no doubt well founded. We have no intention of recommending that the same experiment shall be tried again, as we feel sure that the necessary supplies for local residents can be far more cheaply and conveniently provided at large temporary depôts in the forest on the sites of the periodical fellings. We are not, however, prepared to say that those fixed depôts would not have had a much larger measure of success than they have had, had the plan been steadily persevered with and improved as experience might have suggested.

The depôts succeeded partially as a source of supply of superior wood, but failed as regards wood of little value.

Effects of the rule limiting purchases at the depôts to wood of the value of Rs. 10—depôts unable in consequence to meet the demand of well-to-do local residents.

Apprehensions that dealers might take advantage of the low prices charged at the depôts.

44. The evidence shows that the agricultural depôts had some measure of success as regards the better kinds of wood brought to them, but failed signally, as might have been expected, as agencies for distributing what, for want of a more expressive term, we may call 'rubbish'. The good timber found a ready sale and was, as is generally admitted, very moderately priced. It was possible to recover the cost of cutting, carriage, &c., in the case of the really superior material and yet keep the retail price within reasonable limits. Had it not been for the rule which allowed no cultivator to buy more than Rs. 10 worth of wood in a year in any depôt, and had they been sufficiently stocked for the purpose, there is every reason to think that these depôts would have supplied a real want, and done a large business in retailing useful building timber to the more well-to-do residents. Even in this respect, however, they were rendered comparatively useless by the fear, which has unfortunately been betrayed in all arrangements for local supply hitherto attempted in Thána, that traders would take advantage of the low prices charged to secure wood for export, and thus defraud Government of legitimate revenue. So long as the produce of occupied lands is subject to no control in transit, this fear is a well grounded one. But with a proper system of passes applicable to timber from private holdings as well as forests no opening for fraud of this kind will any longer exist.

Failure of the depôts to supply the wants of poorer classes.

45. But the agricultural depôts must in any case have failed as a means of supplying all *inferior* forest produce required chiefly by the poorer classes. As Mr. Crawley-Boevey says, the system "assumes the ability of all classes requiring wood or forest produce to pay in cash," and "deprives the community of their one great resource, *viz.*, the power of supplying their own needs by means of their own labour." The prices of inferior pieces of wood, including cost of carriage, &c., were necessarily higher than most ordinary cultivators could afford to pay, and the system took no account of the fact that large numbers of the rayats in Thána are too poor to pay anything at all. It is, therefore, not a matter

of surprise that the poorer cultivators should have avoided the depôts. As Mr. Atkins observes:—

"Many cultivators, especially in the more open parts of the district, did resort to the depôts and benefited by them: but other cultivators probably found it much cheaper to bribe forest guards, and others came to the conclusion that a better plan still was either to elude the vigilance of those guards or else to boldly defy them and help themselves in the forests to whatever they required."

46. The *sávkár* class, on the other hand, as we have already shown, objected to the depôts because their particular wants were very insufficiently supplied therein. They were, as Mr. Atkins points out, "most eager at first to buy large quantities of wood at the exceptionally low rates charged at the depôts," but objected to the system when they found out very soon that these low rates were intended only for cultivators. Witness No. 13 (*vide* Volume II., page 31) also states; "no one would buy the ploughs, because they had to be paid for, and they could obtain the same from the jungles without any payment. If the depôts were stacked with all things needful, and it cost no more to get things from the depôts than from the jungles, the more wealthy rayats would resort to them, but those who habitually provide these materials by their own labour would not go to them." These two causes, *viz.*, the absence of sufficient provision for the only class who would have bought freely, and the inability of the more indigent rayats to buy what was offered them, account in a great measure for the popular complaints against the working of the depôts. No doubt, as we have suggested in our 30th Circular question, there was also a sentiment amongst the cultivators "that by using the depôts they would tacitly waive their claims to be allowed to take their materials from the forests when and where they pleased." But a still more potent factor in the case was perhaps the feeling that neither the agricultural depôt system nor any other unpopular system of supply would be persevered with in earnest, if its failure could be ensured by passive obstruction or active agitation.

Causes of failure: Insufficient provision for the richer classes; inability of the poorer rayats to purchase.

Popular sentiment.

47. As in the case of other systems tried, with far less to recommend them, the agricultural depôts seem to have been regarded both by the authorities and the people themselves as mere temporary make-shifts. There is nothing indeed in the report of the Conference of 1882 to show that they were not intended to be permanent institutions, and Mr. Ebden, who took part in that Conference, has stated before us that he himself believed these depôts would be permanently maintained. On the other hand Mr. Atkins (*vide* Volume III., page 83), states that they "were never intended to be more than temporary institutions to last only until a retail trade had grown up, and meant to prevent serious inconvenience being occasioned by strict forest regulations which, as a matter of fact, never existed except on paper." However this may be, we are fully convinced that no schemes for local supply involving the closure of forests against irregular exploitation, however reasonable and sufficient the arrangements thus made may be, can have any chance of success in the Konkan districts, unless there is a clear understanding am concerned, from the Central Government to the most humble cultivator, that that scheme is a final settlement of all the questions at issue, not of course as regards all minor details, but at least as regards the main principles at stake. So long as any such arrangements are regarded as temporary experiments, evidence of failure will never be wanting. The general sense of the people is naturally against all measures which involve any change in former practices, and they cannot be expected to alter their ways and feelings until fully assured of the absolute finality of the new arrangements made for them. The more intelligent classes are fully sensible of the importance of preserving the forests and of the injury done to them by irregular cuttings. They will, we have little doubt, cheerfully acquiesce in any regulations necessary to secure this end, provided they know them to be unalterable, and feel that their wants and conveniences, as well as those of the poorer classes, are fairly and reasonably met.

Bad results of frequent experiments and changes of system.

No scheme for local supply involving closure of forests against irregular exploitation can succeed, unless firmly persevered in.

48. In our general question No. 7 addressed to the officers mentioned in paragraph 34 of Chapter I. of this report we sketched out rough proposals (*vide* Volume II., pages 336—338), (1) for firewood supply only and (2) for the supply of building material and wood for agricultural purposes as well as firewood, under one comprehensive scheme suitable for the supply of trade as well as local

Rough proposals of the Commission submitted for opinion of official witnesses.

Chapter IV.

Section II.

Timber, Firewood and Bamboos.

Final recommendations.

wants. The latter scheme, with some modifications, appears to us after mature reflection to fulfil all the conditions necessary for making a satisfactory and permanent provision for the local demand for timber and firewood throughout the Thána and Kolába districts. As will be seen from a perusal of the answers, a large majority of the officers, whose criticism has been invited, also declare themselves strongly in favour of its adoption.

49. We will now describe the scheme in detail. We assume in the first place, as the evidence fully justifies us in doing—

(1) That a certain proportion of the population of the Konkan districts requires, but cannot pay for, firewood, and that no scheme which presumes that this section of the population can, under existing conditions, be made to pay for this commodity, however strictly forest regulations may be enforced, is, having regard to former customs, either practicable or just.

(2) That there is a further population whose chief means of livelihood depend on the collection and sale of head-loads of firewood, and whose wants as well as those of the classes who in their turn depend on them for their supplies, must be amply provided for.

We assume further that it is absolutely necessary for the proper preservation of the forests that all irregular exploitation therein of either dead-wood or live-wood for timber and firewood must be effectually prevented. Lastly, we assume as a necessary and vital condition of the success of the arrangements proposed that effective measures, to prevent the unauthorised export of timber and firewood obtained at favoured rates for local supply, will be taken by amending Section 41 of the Forest Act, so as to bring the tree produce of occupied lands under the same control in transit as all other forest produce.

Special cuttings to be made for local supply of timber and firewood.

50. We recommend that special cuttings shall be made early in each season in the different forest blocks, as general convenience and the exigencies of working plans may dictate, of sufficient extent, so far as the resources of the forests will admit, to supply the timber and firewood demand of all villages dependent on those forests. These cuttings should be made departmentally. The better class of firewood and all wood suitable for building and agricultural purposes should be stacked by the same agency in convenient places as near as possible to the site of the different clearings. All branch and small wood of two inches and less in diameter should be left on the ground wherever the trees are felled.

All small branch wood to be allowed to be removed free by head-loads by any one so choosing.

51. Free permission should be given to *all* persons who so choose to take without any payment all the branch wood so available either for personal consumption or retail sale throughout the district, but not for sale in large municipal towns, or export from bunders or railway stations, or sale to large local industries supplying Bombay, except under arrangements to be noted below. We do not consider it necessary or desirable that the privilege of retail sale of head-loads of branch wood should be limited to members of the so-called wild-tribes. There is no real reason to make any distinction between them and any other indigent and depressed classes who earn their livelihood by cooly labour. It may be safely assumed that no local resident will follow this calling except he is compelled to do so by extreme poverty, and that no one will care to carry away a head-load for his own use if he can afford to pay some one else for the trouble.

Head-loads of branch wood to be removed if required for *ráb* as well as firewood.

52. Nor is it necessary to make any condition that the branch wood so removed shall be used exclusively as firewood. Any one wanting it for *ráb* purposes should be allowed the same privilege of free collection and sale. It is not likely that for some years to come the residents of the forest villages in which the cuttings take place, who will, if the proposals made in the following section of our report are approved, have ample facilities for obtaining *ráb* materials independently of the annual fellings, will diminish the supply of branch wood available for firewood for the poorer classes by utilizing it for *ráb*. It may, however, in exceptional cases, be so utilised by the residents of the neighbouring non-forest villages who, under our proposals, will not be allowed to lop trees for *ráb* in any forest lands. But this demand will, we believe, be a very limited one.

53. In order, however, to ensure that the supply of branch wood for the indigent classes shall be as ample as possible, and in case the supply of this material from the special cuttings is found insufficient, we further propose that, if necessary, a clause may be inserted in all firewood contracts to remove wood for export, that all branch and small wood of two inches or less in diameter shall be reserved for local use in the same way and under the same conditions as similar wood provided by the special cuttings.

Further reservation, if necessary, of branch wood in firewood contract, for export.

54. As wood of this description is not likely to be in much demand for export, there is little chance of traders employing the wild tribes or other labourers to collect it for them. Should such a demand arise the trade should be controlled and a fair export duty levied under Section 39 of the Forest Act at all railway stations or bunders. The head-loads of branch wood which may be brought by wild tribes or other similar carriers to places of export can either be taken over by the Forest Department at fixed rates for subsequent sale to dealers, or else arrangements can be made with certain contractors to pay a royalty of so much per candy on all head-load wood purchased by them direct from the wild tribes.

Fees should be levied on head-loads of branch wood, if exported.

55. This system is already, as we learn from Colonel Peyton, in force in Kolába. The wild tribes are allowed, in that district, to give them as much employment as possible, to bring head-loads of split wood to certain bunder depôts. The wood thus brought is taken over by the Forest Department at a fixed rate of from one to three pies a bundle, according to size, for subsequent sale to export dealers. From eight to twelve large fagots and from twenty-five to thirty small fagots go to a head-load. The financial results of the experiment during the past year are shown in the subjoined table. No charge for establishment is made as the work is done by the permanent establishment:—

System tried in Kolába.

Range.	Expenditure.	Realization.	Net Profit.
	Rs. a. p.	Rs. a. p.	Rs. a. p.
Panvel	339 7 3	431 3 9	91 12 6
Pen	90 0 0	100 12 6	10 12 6
Nágothna	775 0 0	910 0 0	135 0 0
Total ...	1,204 7 3	1,442 0 3	237 9 0

The profits realised from this experiment are of course inconsiderable, but with further development larger results may be expected. It shows, however, that with judicious management a good deal of legitimate employment can be found in this way for the wild tribes with advantage both to them and the Forest Department. There is no reason why the branch wood available from the annual fellings, if there is a surplus after meeting local wants, should not be utilised in the same way to meet any export demand which may arise.

56. Similarly as the head-load privilege above recommended is intended for the benefit of the poorer agricultural classes, we see no good reason why fees should not be levied on all head-loads of firewood brought from the forest clearings for sale in large municipal towns where the bulk of the population is non-agricultural. Such fees are now levied on head-loads brought into the town of Thána. The same system might be applied to the towns of Kalyán, Bhivandi and Bandra without objection. We learn from Mr. Wilkins' evidence (*vide* Volume II., page 268) that similar fees were levied from 1874 to 1882 on head-loads brought to large towns as well as to railway stations and bunders. These fees were in fact collected at all *nákás*. In some cases the right to levy the fees was farmed. The levy of fees on head-loads was necessarily discontinued when

Fees should similarly be levied on head-loads of branch wood brought for sale to large municipal towns, or to large local industries supplying the Bombay market.

the contract system for the supply of firewood was introduced in 1883, as under the arrangements then made, the wild tribes could only dispose of head-loads by sale to the contractor. This system was in force as before stated for only one year. Since then, as Mr. Wilkins observes, the free head-load privilege granted to wild-tribes has prevented the fees being again imposed, except in Salsette, where no such privilege was considered necessary.

Proposed rate of fees on head-loads.

57. But so long as all the wild-tribes and other depressed classes have the privilege of removing head-loads of branch wood free either for personal consumption or local sale to the agricultural population, we see no valid objection to levying fees on similar wood brought for sale to the inhabitants of large towns, or for consumption by large local industries supplying the Bombay market. The whole amount of the fees in such cases must necessarily fall on the consumers and not on the carriers. Instead, however, of levying a different rate on men's, women's and children's loads according to the present Thána practice, we think it will be better and simpler to charge an allround rate of 6 pies per head-load. The Thána rule is easily and we believe systematically evaded. Whenever a party of Thákurs, consisting of men, women and children, each carrying his or her accustomed load come within sight of the *náka* where fees are levied, they naturally stop and rearrange their loads, so as to make themselves liable to the minimum amount of fees possible. The strong men of the party add the women and children's loads to their own, pay the fees accordingly, and immediately they have passed the toll bar redistribute the loads as before. Disputes may also frequently arise as to whether a boy should pay for a man's load or a girl for a woman's load or a child's load. By imposing an allround rate all disputes of this sort will be avoided, and the carriers may be trusted to make their own arrangements to prevent having to pay fees for less than full loads.

Present privileges of collecting dead wood should cease, except in very exceptional cases.

58. Under the system above explained the present privilege of collecting dead-wood from the forests enjoyed by residents of forest villages and wild tribes must necessarily cease. We believe that the supply of branch wood obtainable from the special cuttings, supplemented if necessary by the further supply available from contract or departmental fellings for trade purposes, will amply meet the demands of the poorer classes for firewood. In the very unlikely event, however, of there being any deficiency in this respect, it may be advisable in special cases, and under very strict supervision, to give the Divisional Forest Officer a discretionary authority to allow the wild tribes of certain localities to remove dead-wood from particular areas of forests, where there is known to be a supply of this material, and where the privilege can be exercised with the least risk of abuse. We trust, however, that under the arrangements we have proposed no such necessity will arise.

Arrangements for supply of superior firewood to local residents.

Passes for firewood bought at forest fellings to be given to cover transit from *coupes* to destination within the district. Export passes to be refused.

Rates to be charged per cart-load to inhabitants of forest villages and others.

59. The better class of firewood which will be collected in stacks of convenient size should be sold to all applicants who are residents of the district, at fixed rates per ordinary cart-load, for local consumption only. Passes should be freely given to cover all wood so bought when in transit between the *coupes* and any village in the district to which the purchaser may wish to take it. But export passes will of course be refused. This firewood should be given to all residents of forest villages and of villages whose boundaries touch the boundaries of forest villages at 8 annas per cart-load, and to all other local residents at a rate 25 per cent. in excess of that charged to the former, or say 10 annas a cart-load. Each of the villages coming under the latter description should be told off according to convenience to a particular forest block. But no village should be treated as a forest village in respect of timber and firewood supply unless it has contributed land to the formation of one of the regular forest blocks. The taking up of any small areas of land for experiments or plantations should not qualify the village concerned to be considered a forest village.

Firewood for local industries should be supplied in the same way and on the same terms.

60. All firewood required for any local industries such as sugar-boiling, should be supplied in the same way and at the same rates as wood for domestic consumption. It appears to be an old complaint, dating from Dr. Gibson's time, that the sugar-boilers habitually abuse the privilege of getting cheap firewood from the forests by trading in the material so obtained. But under the system we advocate the checks against such abuses will be the same in their case as in the case of all other local consumers, and ought to prove effective.

61. All the wood suitable for building and agricultural purposes obtained from these special fellings should be stacked ready for sale to all applicants who reside in the district, whether artisans or cultivators, for local use only, but not for export. The fixed rates for building wood for residents of forest villages and other villages whose boundaries touch those of forest villages, should, we think, be as follows :—

Arrangements for supply of wood for building and farm implements, &c.

Rates for building timber.

For teak of sizes—

1st Class	from	Re. 1 to 1¼	per pole.
2nd	do.	As. 8 to 10	do.
3rd	do.	„ 4 to 6	do.

For jungle wood of sizes—

1st Class	from	As. 12 to Re. 1	per pole.
2nd	do.	„ 6 to 8	do.
3rd	do.	„ 2 to 4	do.

Rates for wood for agricultural purposes.

62. Wood suitable for agricultural purposes should be disposed of in the same way at rates to be fixed on the same principles as the prices previously charged at the agricultural depôts. The actual prices so fixed will no doubt be much less than those charged at the old depôts, inasmuch as the cost of carriage from the forests to the place of sale will be saved.

Extra charge to be made to inhabitants of villages lying outside the forest circle.

63. As in the case of firewood however an extra charge of 25 per cent should be made to all purchasers of building or agricultural wood who reside in villages lying outside the forest circle as above defined.

Periodical petty auctions of materials stacked at *coupes*.

64. Besides keeping timber for sale at fixed rates it will also be found convenient to have periodical petty auctions, especially of teak rafters, to meet the convenience of purchasers or dispose of surplus stock. If it is found that export dealers frequent these petty auctions and compete with *bonâ fide* local residents, the practice can easily be stopped by making it a condition of the sale that the material so bought shall not be exported.

Free grants of wood to be met from the annual fellings.

65. As a rule all free grants of wood for building and agricultural purposes which may be made under any rules in force for the purpose, should be met from the special fellings like all other local demands. If in any case the supply of agricultural wood available from the special fellings is less than the local demand, the deficiency should be met by inserting a clause in any contract for felling for export, that the requisite class of wood obtained from such fellings shall be reserved for local supply. In all cases, however, we consider that the supply of local wants in the fullest and most convenient manner, should be the first consideration in determining the operations for the year, and that firewood contracts for trade supply should not be given in any locality until it is ascertained that the arrangements already made to meet the local demand are reasonably sufficient.

Reservation of wood for local supply can also be made, if necessary, in any contracts for export.

Regulations for the management of the temporary *coupe* depôts.

Extra temporary establishment necessary.

66. The *coupes* should be kept open throughout the fair season for the supply of timber and firewood to the local population, but, to avoid possible injury to young shoots, carts should not be allowed to enter the fresh clearings. These arrangements will no doubt entail much labour on the Forest establishment, and will probably necessitate the employment of extra temporary hands during the fair season to control the work of distribution at the *coupe* depôts. But the extra expenditure thus entailed will be amply recouped by the increased revenue which will be derived from the superior firewood locally consumed, which under the present system yields little or nothing.

Consideration of the objections raised to the scheme.

67. As we have before stated a large majority of the officers consulted consider the scheme above described to be sound and practicable. Messrs. Shuttleworth, Atkins, and Thatte are in fact the only officers who point out any objections to it, and the only objection raised by Mr. Atkins appears to be that the scheme will be fatal to the retail trade which he would encourage by giving a practical monopoly of the local supply, in tracts where the demand is great, and the supply

limited, to a contractor for a long term of years. In other respects he too thinks the scheme a good one. The Thána Association, as representing the people, doubts the ability of the Forest Department to carry out the task proposed to be entrusted to it, and thinks the system would be open to grave abuses. Considering all the facts brought to light by our inquiries and the repeated failure of all experiments made in recent years for meeting local wants sufficiently and conveniently, it is not perhaps to be wondered at that the Thána people should mistrust the character of any further arrangements proposed with a similar end in view. It is to be observed, however, that the extract from the report of the Committee of 1875 which is quoted in support of their objections, refers to a scheme which has very little in common with the proposal we have made above. The scheme which the Forest Committee of 1875 condemned so forcibly and rightly, contemplated, if its scope is correctly described in their report, the doling out by weight to each individual inhabitant of the district a fixed and limited annual supply of *ráb* and firewood. It is needless to state that our proposals provide for no such elaborate distribution. So long as the wood purchased at the *coupe* at favoured rates goes to meet the *bonâ fide* local demand it is as unnecessary as it would be impossible to lay down the exact quantities which any individual should be allowed to remove. The operation of the rules under section 41, amended as proposed, will ensure that the wood obtained at favoured rates for local consumption will not be diverted to meet trade demands. The subsequent distribution amongst the local residents of wood obtained at the *coupes* is a matter of little or no concern to Government or the Forest Department, so long as it is not smuggled out of the district. All that the Forest Department will have to do will be to see that the local demand is fully and conveniently met, and to leave the distribution to the people themselves according to their own wants and convenience.

68. We have also fully considered the objections raised by Mr. Shuttleworth. We differ entirely from his conclusion that the scheme will involve a large sacrifice of public revenue. He seems to assume that firewood will be given free to all classes of the population. There is however nothing in our proposal to warrant this assumption. The inferior branch wood available from the fellings will certainly be given free to meet the wants of the poorer classes who have no means of purchasing it. But there is little chance of the more well-to-do classes getting their firewood for nothing under cover of this privilege. The wood made available is not of the kind which they habitually consume. And, moreover, except for those who live within a short distance of the forests, it will be actually cheaper to pay the fee for a cart-load of superior firewood, plus cart hire, than to purchase an equal weight of head-loads of free branch wood from the wild tribes. On the contrary, we believe, as we have above stated, that the revenue from forest produce locally consumed will under our proposals be very considerably in excess of what is realised under the existing arrangements, while the benefit to the forests which will result from the withdrawal of the dead-wood privilege, which is so obviously incompatible with a proper working of the forests, will greatly overbalance any trouble which the successful carrying out of our proposals may entail. We see indeed no practicable alternative between the arrangements we propose and a system of licensed but irregular exploitation of the forests. Very little reflection is necessary to decide which of these two courses is preferable in the permanent interests both of the State and the local residents.

69. It is of course a necessary drawback that any department of Government should have to undertake work which could under ordinary conditions be better and more conveniently done by retail traders. But this under the present circumstances of the Thána and Kolába districts we consider unavoidable. The only alternative to the departmental system is to place the distribution in the hands of contractors, as Mr. Atkins has proposed, in his answer to our circular question No. 11 on the subject of the supply of firewood, &c., to residents of non-forest villages. His remarks on the subject deserve careful attention, as the proposals he has made are evidently the result of much thought and consideration, aided by exceptional local knowledge of the requirements of the Thána district. We give the substance of his proposals in his own words. He writes :—

Mr. Atkins' proposals for firewood supply through the agency of contractors.

"The scheme I propose is that (1) all the firewood yielded by a forest annually should (either after or, better still, before it is cut) be sold to a contractor, who should be bound to keep it at his depôts ready for retail sale during a certain number of months in the year to all comers for whatever purpose they may require it; (2) that an export duty should be charged as explained in my answers 23-25 on all wood removed from the *táluka* without a pass, in order that it may be more to the contractor's interest to sell his wood retail in the *táluka* than to export it, and that, by checking the export of wood by those who purchase from the contractor, the retention in the *táluka* of as much wood as is really wanted for local consumption may be ensured; (3) that, in case of the number of contractors employed in a *táluka* being so small that there would be a chance of their combining to charge monopoly prices, a maximum price (say eight annas a cart-load) for the inferior firewood, consisting merely of branches of trees, should be fixed; (4) that annual tenders for the contract should not be called for, but that a contract should be given out for at least five or ten years and be renewed under ordinary circumstances as a matter of course at the end of that period, in order that it may be worth the while of a contractor, instead of trying his utmost to make every penny he can during his contract year, to settle down and establish a steady retail trade, a thing which is very badly wanted in the Thána district; (5) that the contractor should be bound by his contract either to hand over gratis, or to sell at specified very low rates, a specified number of cart-loads of firewood per year to specified individuals, *viz.*, those whose names are entered in the forest register as possessing special privileges or rights. Such persons, if the commutation of deadwood privileges referred to at the end of my first answer is carried out, will be the heads of families permanently resident in either forest villages or those non-forest villages mentioned in my 12th answer as having special claims to be treated in the same way as forest villages.

"This scheme relates only to the more civilized *tálukás* (such as Kalyán and parts of Karjat, Bhiwndi and Murbád) in which all or almost all the State forests must be treated as firewood reserves, formed more in the interest of the local population than with a view to obtaining a very large revenue."

Objections to the above scheme.

70. The fatal objection, however, to this scheme is that it contemplates the commutation of all dead-wood privileges now enjoyed by individual residents into privileges to be supplied either gratis or at a very low rate with a specified quantity of firewood, and a special registration of each privilege so admitted. It would be impossible to carry out any such settlement of the question without causing infinite trouble and very widespread dissatisfaction. Mr. Atkins' suggestion that these privileged lists should be drawn up by the working plans officers is also open to great objection. All attempts to limit local consumption by fixed allowances to individuals would, we believe, certainly fail; and so long as the export of all timber and firewood can be effectually controlled under a proper system of passes, the necessity for such limitation does not in reality exist. Moreover it is not only those who under existing regulations have the privilege of collecting dead-wood free, who have reasonable claim to have due provision made for their wants in any general arrangements for the supply of the local population.

71. Another objection to the distribution of firewood under a contract system lies in the fact that it is at present impossible to estimate even approximately the local demand for firewood, and consequently impracticable to specify the quantity which a contractor should be required to supply at fixed rates for local consumption. It is possible of course to make a rough calculation according to the population and the supposed requirements per head, of the total volume or weight of wood annually wanted for this purpose; but even if anything like a reliable estimate could be so made, it would be impossible to ascertain what proportion of the demand would ordinarily be met from private sources and what proportion would have to be supplied from the forests. Experience only can show what the extent of this latter demand will be. Under the present system of irregular exploitation no one can tell how much is taken from the forests; still less can it be estimated what proportion of the wood so taken is locally consumed and what proportion is smuggled out of the district as the produce of private holdings through trade agency. Under the *coupe* depôt system the quantity taken can be ascertained with sufficient accuracy for all practical purposes. The demand for special fellings will of course vary greatly according to locality. In tracts like Mokháda, if required at all, the fellings will be very limited in extent, whereas in populous *tálukás* like Kalyán the resources of the forests will probably be taxed to the utmost extent compatible with the permanency of the supply, to meet local wants. The present drain on the forests for local

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SECTION II. TIMBER, FIREWOOD AND BAMBOOS.

consumption will, however, be considerably lessened everywhere if the proposals we shall make in a separate part of the report for the disposal of the royalty trees to occupants, are accepted and carried out.

Arrangements for supply of bamboos for local consumption.

Inhabitants of Forest villages should be allowed to remove bamboos from unclosed forest areas free for *bonâ fide* personal wants.

All other local residents who require bamboos should get them on permits at fixed fees.

72. We have stated our opinion above that the present permit system is the most convenient one for supplying bamboos of all sorts to local residents. We would recommend, however, that residents and cultivators of all villages which have contributed lands to forests should be allowed to take bamboos for their *bonâ fide* personal requirements from the unclosed portions of the forests without payment and without passes of any description, provided that the bamboos are not transported beyond the limits of the forest block and the villages in which they reside or hold land. It is always difficult to make people who live close to, and perhaps in, the forests follow the procedure laid down in the permit rules, when they can so easily evade them. The demand of forest villagers for bamboos for agricultural purposes is moreover so insignificant that it is not worth while to attempt to make any regulations on the subject. There is also little fear of the concession being abused. The chief demand for bamboos in the Thána District is that of the garden cultivators of Bassein and Máhim who require very large quantities for platforms and standards for betel vines and supports for plantains. For those consumers and all residents of non-forest villages the present permit system should be maintained.

Rates for bamboos removed from forests under permits for local consumption.

Changes recommended.

73. The rates now charged as laid down in the table appended to the Collector of Thána's Circular of the 30th October 1885, are fair and moderate. We see however no reason for charging 2 annas 6 pies for a head-load of *manvel* bamboos supplied to a Burud or basket-maker, and 1 anna for the same quantity of the same material to a Mhár who requires it for making matting, &c. The distinction is arbitrary and unnecessary. The price for *manvel* bamboos should be fixed according to the market value per 100, and any local resident should be allowed to take any smaller quantity, or single bamboos, if he pleases, on payment of a proportionate fee. With this slight alteration the present list of rates for bamboos for local consumption should be confirmed.

Supply of *ain* bark to fishermen for tanning nets.

74. The special demand of the Koli fishermen of the Coast for *ain* bark for tanning nets, which is alluded to by Thána Witness No. 57, and in Mr. Wilkins' evidence (*vide* Volume II., pages 115, 116 and 265), can easily be met like all other local demands, from the annual fellings. No special fellings for this purpose will be required. A supply of bark sufficient for the Kolis' wants can be prepared and stored at any of the *coupe* depôts most convenient for the purpose. As the present complaint of the fishermen is that the supply is insufficient, rather than that the prices charged are too high, no alteration in the present rates appears necessary.

Special conditions of the Kolvan Survey Settlement as affecting local supply of timber, firewood, bamboos, &c.

75. Some doubts have been raised by the evidence as to the exact extent of the rights, if any, granted to occupants under the terms of the Kolvan settlement to cut trees for domestic and agricultural use in waste lands, other than Imperial forests, as well as in their own holdings. In connection with this point we may specially refer to the evidence on the subject given by Mr. Atkins (*vide* answer to No. 6 of the questions put by the Thána Association, Volume II., page 258), and the report made by Mr. Mackenzie, when Collector of Thána, on a petition on the same subject preferred by certain rayats of the Kolvan *táluka*, (*vide* Volume IV., pages 105 and 106).

76. In paragraph 8 of his report on the Kolvan settlement (No. 558 of 20th December 1865), Major Waddington wrote "The people were informed that they were at liberty to cut firewood and timber for their farming implements and dwellings in any lands except those set aside as Imperial forests. Teak, blackwood, *tivas* and bamboo (the people however being allowed to cut the latter for domestic purposes) were everywhere reserved to the State. No wood of any kind is to be exported or sold for export." In forwarding this report Colonel Francis, the Survey Commissioner, observed (paragraph 3 of endorsement No. 429 of 27th June 1866) that "it was arranged for reasons stated that an occupant should have free use of any wood in his holding, but that he was restricted from cutting it for purposes of sale." He then proceeds to justify the proposed restriction on the sale of trees in occupied lands, but passes over

without comment Major Waddington's declaration that the people had been informed that they were at liberty to cut firewood and timber for their farming implements and dwellings *in any lands except those set aside* for Imperial reserves. In their Resolution No. 3183 of the 5th September 1866 Government, in sanctioning the proposals, remarked that "ample liberty seems to have been given to the rayats respecting the cutting of timber by the arrangements of Major Waddington, which do not deprive them of the rights exercised heretofore in respect of wood."

77. On the 10th April 1867 Major Waddington forwarded to the *mámlatdár* of Sháhápur for guidance a copy of the memorandum containing the terms regarding forests and other matters as announced to the rayats at the *jamábandi* of that *táluka* (*vide* Exhibit No. 23, Volume II., pages 137-138). In paragraph 4 of this memorandum it is stated that "with the exception of teak, blackwood, and such other timber trees as would be reserved by Government, the registered occupants of the numbers are entitled to cut under Section 40 of the Act from the forest in their numbers, *táhál* and wood for domestic purposes, *i. e.*, wood for agricultural purposes and for fuel; but they are not allowed to cut for trade." In paragraph 3 of the same memorandum it is declared that "in those numbers set aside for Government or other purposes, no one will be permitted to use such lands for any (other) purposes."

78. It will be seen from the above that this memorandum of the terms of the settlement contains no such concession as regards user of waste lands other than Imperial forests, as is alluded to in paragraph 8 of Major Waddington's original report. It appears in fact to withdraw a provision in favour of occupants which Government had already sanctioned, if not expressly, at least by implication. We mention the facts as they appear to constitute a special grievance of the residents of the Kolvan *táluka*, but we do not consider the point to be of any real importance, whatever interpretation be placed on the exact terms of the settlement. It is clear in any case that the Imperial forests were not finally demarcated when the settlement was introduced, and that the privileges alleged to have been granted would necessarily be withdrawn as regards any waste lands subsequently included in such reserves. Under the arrangements we propose the inhabitants of Kolvan will have all their reasonable wants in the matter of timber, firewood and bamboos supplied in the same way as the residents of any other *tálukás*. They will have still less cause for complaint, if, as we shall propose in Chapter VI. of this report, the present rules as regards the unreserved trees in their occupied lands are relaxed, so as to allow them full liberty to dispose of them in any way they please, except to export them or sell them for export.

Special conditions of the settlement of *varkas* lands in the Karjat *táluka*.

79. Somewhat similar doubts have been raised as to whether under the peculiar arrangements made as regards the *varkas* lands at the original settlement of the Karjat *taluka*, any such lands can now be included in forests without infringing the conditions of that settlement. This point is alluded to in Colonel Godfrey's evidence (*vide* Volume II., pages 9 and 10). We do not propose to discuss this matter further than to state that we consider the view taken of the matter by Mr. Atkins (*vide* Volume II., pages 255 and 256) to be correct, and that Government have incurred no special obligations in the settlement of that *táluka*, which need in any way preclude the demarcation of forests there on the same principles as in any other of the North Konkan *tálukás*.

Reasons for proposed compromise of the claims of non-forest villages in relation to supply of timber and firewood.

80. We must now explain the reasons which have led us to recommend that the residents of all villages whose boundaries touch and adjoin those of forest villages shall be supplied with timber and firewood in the same way and on the same favoured terms as the residents of forest villages, and that higher rates shall be charged to all other local residents. We have very fully considered all the evidence brought before us regarding the claims of residents of villages which have no forests of their own to resort to the forests of other villages to supply their wants in firewood and other forest produce. We consider that in many cases their claims are well founded. In dealing with the grazing question in the preceding section of our report, we have advised that any claims preferred by non-forest villages for free-grazing in forests based on the insufficiency of pasturage within local limits and former long established

practice, should be inquired into, and that if admitted, the residents and cultivators of such villages shall have the same privileges as regards free-grazing in the unclosed portions of the forests, in which the areas they formerly used for this purpose have been incorporated, as the inhabitants of the villages within whose boundaries these areas are now included.

81. The claims of the non-forest villages for firewood privileges in forests are based, like similar claims for free grazing, mainly on former custom. Mr. Atkins has shown as clearly as it can be shown how the custom arose (*vide* Volume II., page 47). He states :—

"It has always been the custom for the residents of villages in which there is no well-wooded land sufficient to supply their wants in the matter of forest produce to resort to the nearest jungles in other villages to get their supplies of firewood, so far as they used it, wood for agricultural implements, and in a very limited number of cases *ráb* materials also. The growth of this custom is easy to trace in Murbád. As you move gradually from a very jungly to a comparatively bare part of the *táluka* you find villages in the very remote parts in which no non-residents claim firewood *vahivát* and the residents concur in asserting that no such *vahivát* exists and that the jungle is used by them alone. If you move further towards the bare parts of the *táluka* you find that, while the residents concur in asserting that no such *vahivát* amongst non-residents exists, yet some non-residents claim such a *vahivát* for their village, and others do not. If you move further you find that, while residents still deny such a *vahivát*, non-residents claim it pretty extensively. You come to a part of this district in which the residents of the well-wooded villages admit the claims of the residents of neighbouring treeless villages. Eventually you come to cases in which though the firewood *vahivát* of another village is admitted by the residents of a village in their *gurcharans*, yet these villagers themselves admit that it is necessary to cut at once all the seedlings and young trees which spring up every year in the rains to supply their wants in the cold weather and in the hot weather. They as well as the residents of the other villages partially dependent on them are obliged to resort to the *gurcharan* of another village which still has an unexhaustive supply of wood. I have made careful inquiries as to these customs wherever I have been. It would be difficult to ascertain with any certainty the exact extent of the custom of the residents of one village resorting to another for firewood. But in many cases the custom is sufficiently clear. It would be feasible to supply the firewood requirements of non-forest villages from the forests, provided compact blocks of the latter were formed and scientifically worked. If the residents were allowed to continue the old system of collecting for themselves, the supply will be gradually and surely exhausted."

82. Mr. Atkins has also shown (*vide* extract quoted in paragraph 84 of the preceding section) how in some cases such claims have a special justification, owing to the fact that large villages with numerous hamlets have been in comparatively recent times split up for convenience of revenue administration into numerous separate villages with the result that no part of what was before common forest land of all the hamlets has been included in some of the newly formed villages.

83. The claims of villages, principally coast villages, having no resources of their own to be supplied with fuel on the terms hitherto enjoyed by them were recognised by the Committee of 1863 (*vide* paragraph 35 of Exhibit No. 1, Volume II, page 362). Instead however of allowing them to cut fuel for themselves it was intended that the necessary supply should be cut for them by the Forest Department and made over to them at a fixed price equivalent to the customary fees previously paid plus the cost of cutting. The residents of forest villages were on the other hand to get their firewood from the unreserved trees in the tracts specially set apart for the village communities. It is not quite clear whether in the demarcation which resulted from the recommendations of the Committee of 1863, the village allotments were formed in any case with the intention that the residents of any villages other than those whose lands were included in the reserves should have the same privileges of cutting therein as were given to the residents of the villages contributing land for the reserves. No such intention is apparent in the recommendations of the Committee of 1863. Captain Lloyd, however, in his report of the 20th August 1866 (*vide* Volume II., pages 372—376) writes "the only instance where the cutting of wood for other than local purposes may be anticipated is where several villages have the right of drawing their supplies from one particular jungle, *and the allotment has consequently been marked off with a view to meet the whole demand.*" From this it

may perhaps be argued that the claims of some outside villages were taken into consideration in marking off village reserves, but this is not quite clear from the words used.

84. The Committee of 1875, as before observed, denied the claims generally of the residents of non-forest villages to exercise the same privileges in second class reserves as the residents of forest villages, as regards firewood and *ráb*, though admitting their claim to graze their cattle therein where the custom formerly existed. But whether these claims have or have not been recognised in former years, and whether provision for the exercise of them was or was not made in demarcating the village reserves, there is little doubt as to the actual continuance of the practice, at any rate until a stricter régime was introduced in 1882. As we learn from the report of the conference assembled in that year "the Forest Settlement Officer informs the Committee that the history of the district forests as traceable on the files and the result of his inquiries in many villages, show that it is probable that there is hardly a village in the Collectorate that has not been in the habit of obtaining its supply of fuel and of agricultural wood direct from the Government jungle, either by sending its inhabitants in person to fetch it, or by purchasing from itinerant vendors, who have paid nothing to Government. Unless the means of obtaining a ready supply of wood be placed within the reach of the public, it is inevitable that either this destructive and inequitable practice must be allowed to continue, or the public in trying to help themselves will constantly be coming into collision with the forest officers, and a very disagreeable and undesirable state of things will be called into existence."

85. The concluding sentence of the above extract indicates the only reasonable solution of the question. A ready and sufficient supply of wood must be placed within reach of all classes whether residents of forest or non-forest villages. But neither class can reasonably claim to be allowed to supply themselves in such a way as will render the preservation of the forest impossible. We do not think that a special inquiry into the claims of each non-forest village for timber and firewood privileges, similar to that we have advised in the case of claims for free-grazing, would be productive of any satisfactory results. We have thought therefore that the best way of settling the question will be to effect a fair and reasonable compromise, and to supply firewood and wood for building and agricultural purposes to the residents of all villages having no forest of their own, but whose boundaries actually adjoin and touch those of any forest village, on precisely the same terms and in the same way as in the case of residents of forest villages. This arrangement, although necessarily somewhat arbitrary in its method, will, we believe, prove in practice to be a very fair settlement of the question. It will obviate the trouble and difficulty of any special inquiry, and will satisfy all who have any reasonable claims to special consideration, while it will still maintain a necessary and proper distinction between the residents of villages in the near neighbourhood of the forests and those of other villages.

Conclusion.

86. We have now described in detail the arrangements we think most suitable for the supply of timber, firewood and bamboos to the local population. We may sum up the advantages of the scheme in a few words by saying that it makes the most ample possible provision for meeting the reasonable wants of all local residents, while at the same time it fulfils the equally important condition of securing the permanency of the supply. Under no other plan that we can devise can these two conditions be secured, and in no other way is it possible, as far as we can judge, to provide any guarantee that more will not be taken from the forests than the maximum legitimate yield. If this system is carried out with firmness and perseverance, in a liberal spirit, and with due consideration to local needs and convenience the inhabitants will no longer have any just grounds of complaint. Its success, however, must necessarily depend in a great measure on the loyal co-operation of the local forest officers, and the earnestness with which they may strive to meet and smooth over all the minor difficulties which the first introduction of arrangements on so large a scale must necessarily bring to light.

CHAPTER IV.

ARRANGEMENTS FOR LOCAL SUPPLY.

SECTION III.

Ráb.

Chapter IV — SECTION III. *RA'B.*

As mentioned in the introduction to this report, our endeavours to elicit valuable information on the subject of *ráb* cultivation from independent experts, whether official or non-official, have in great measure failed. We append, however, to this report a detailed account of rice cultivation in the Thána and Kolába districts, which Mr. Ozanne has at our request drawn up and placed at our disposal (*vide* Appendix). This note fully sets forth all the facts disclosed by recent experiments to test the relative value of the different materials used by cultivators of the Konkan in the preparation of rice seed-beds, and indicates the conclusions which may be fairly drawn from the results obtained. It shows the nature and extent of the practice, and in short all that has hitherto been learnt as to the climatic and other conditions which make this mode of cultivation necessary in one district and unnecessary in another. As far also as we are competent to judge, it successfully combats the assertion very frequently made, that because rice can be profitably grown in some places without *ráb*, the use of *ráb* is everywhere unnecessary, wasteful, and unjustifiable.

General conclusions.

2. From a careful study of this note and all other evidence available to us on the subject we have arrived at the following conclusions :—

(1). That *ráb*, as practised in the Thána and Kolába districts, is good farming, and is, under the peculiar conditions of the tract, the best known method of cultivating rice, *nágli* (Eleusine coracana), and *vari* (Panicum miliare), and that the profitable use of other modes of cultivation known and practised in these districts, is extremely limited, risky, and incapable of any considerable extension.

(2). That there appears no reasonable prospect of replacing *ráb* by a cheaper artificial manure, or by any method of cultivation, customary in other parts of India or elsewhere.

(3). That without first exhausting the available supply of cowdung, shrubs, and brushwood, for the principal layer, the use of loppings from valuable timber trees for *ráb* is unwise ; that, therefore, in the best interests of the *rayat* and of forest conservancy, the State should, as far as practicable, insist on the full utilization of cowdung, shrubs, and brushwood, before recourse is had to trees which are valuable for timber and firewood.

(4). That the supply of grass and leaves available for *ráb*, is not greatly in excess of the present demand ; that the utilization of these substances in the manner approved by custom and empirical knowledge, *viz.*, as subordinate layers over the main layers of cowdung, loppings, brushwood, and shrubs, gives the best results and also effects considerable economy ; and that therefore all estimates of the sufficiency or otherwise of *ráb* material in any locality should be based on the available supply of cowdung, loppings, brushwood, and shrubs, the amount per acre of rice land being calculated on the assumption that the necessary grass and leaves for the upper layer will be readily obtainable.

Conflicting interests of cultivation and forests.

3. The practice of *ráb* cultivation, entailing as it now does in the Konkan districts a very large consumption of the small branches of valuable timber trees, is without doubt a very serious obstacle to proper forest conservancy. But the conflicting interests of cultivation and forests in this respect must be weighed dispassionately, and due consideration must be given to both sides of the question. If cultivation by *ráb* is—as we believe it to be—a necessity in the Konkan, a reasonable and sufficient quantity of the necessary material must

be placed, wherever possible, within the cultivator's reach. It is perhaps a fortunate circumstance in the interests of conservancy that only those forest lands which are situated within a very short distance of the cultivated fields, can be profitably exploited for grass, leaves, shrubs, and tree-loppings. The average weight of *ráb* material required to produce seedlings for an acre of rice land has been found by experiments to be about four tons; but it does not pay a cultivator to carry his *ráb* for more than a very few miles. The *bonâ fide ráb* demand therefore, as affecting forest conservancy and demarcation, is limited by natural checks to the villages in the immediate vicinity of the forests. Timber and firewood may have to be supplied from the forests to the entire local population, but *ráb* materials cannot, under any circumstances, be made available from forests to cultivators living beyond a radius of some five or six miles from the source of supply.

Claims of the Memorialists.

4. The claim of the local residents to lop branches of trees for *ráb*, according to former usage, is included in the general petition of right to a free use of the forest and waste lands for the supply of domestic and agricultural wants. As it would be difficult to discuss all the various matters which this general claim embraces within the compass of one single review, we have been compelled, for the sake of clearness, to treat all the different questions of local supply, however intimately connected, one with another, as separate problems, requiring for their solution a separate examination of all the evidence on each subject. In discussing the grazing question and the claims of local residents to be supplied with timber and firewood from forests we have incidentally expressed opinions on many points which have an equally close bearing on the *ráb* question. These general conclusions need not be repeated here. But in order to judge of the merits of the complaints made on this particular subject, it is necessary to examine carefully how the former customs of the people in supplying themselves with *ráb* materials have been affected, both by the treatment of *varkas* or hill lands on the introduction of the Survey Settlements, and by measures since taken as a result of the increased importance attached to forest conservancy. We shall then have to consider whether the provision for *ráb* in the villages in the vicinity of forests is, under existing regulations, reasonably sufficient in the interests of agriculture, and if not how the deficiency can best be met, with the minimum of injury to the forests.

Ráb user in *ante*-survey period.

5. In the *ante*-survey period all the *varkas* or hill lands in the North Konkan, except a few tracts specially reserved as State forests by former Governments, were to all intents and purposes communal wastes. Rice and garden lands were held by the cultivators on a permanent tenure, but no fixed rights of occupancy were recognised in any *varkas* lands. Portions of the common waste were from time to time appropriated for supplying loppings of trees and brushwood for ash-manure. These were called *shindád* (literally tree-covered) lands and were generally attached to particular rice fields. Other portions were appropriated for sporadic cultivation of hill grains or *varkas* crops, and others again for supplying the grass required for *ráb* and cattle. These last were called *khap* lands. Any residue of *varkas* land unappropriated for the time being was utilized as common pasture land. Assessment was levied only on the actual area of *varkas* land under cultivation in each year, the user of the land for any other purpose subsidiary to agriculture being untaxed or at any rate not directly taxed.

6. None of the *varkas* lands which individual cultivators appropriated from time to time were defined by any boundaries, but it is probable that there was a loose partition of such lands, which was fairly well understood and recognized by the villagers *inter se*.

Allotment of *varkas* land for *ráb* at the Survey.

When the Nasrápur sub-division of Thána was first surveyed, it was considered better not to measure off the *varkas* lands, or define in any way the particular plots which individual cultivators used for any purpose. The former customs as regards these lands were in no way interfered with, except that instead of levying assessment on the actual area annually cropped, the user of these lands, whether cultivated or not, was taxed by an extra assessment being imposed on the rice lands of each village, in proportion roughly to the area of *varkas* land available. But this mode of settlement was not approved by Government. They

considered that the hill lands should be separately taxed, irrespective of the uses to which occupants might put them. They wrote (*vide* Prècis, Volume IV, page 7):—

"The absence of any land-marks by which the sub-divisions of hill-lands attached to rice cultivation may be identified and distinguished not only from each other, but also from the *gurcharan* common to the village, and from the Government unappropriated forest and grass lands, appears to His Lordship in Council a great imperfection in Captain Francis' scheme of assessment. It can hardly be otherwise than that, unless such defined limits are laid down by the Revenue Survey, future encroachments, disputes, and uncertainties must arise. Government are, therefore, of opinion that even if the area of the several holdings of hill-lands is not separately determined, measures might nevertheless be taken to mark out their boundaries as permanently and distinctly as circumstances may permit.

"This being done, there will, in the opinion of Government, be little difficulty in assessing on each of those holdings a fixed annual rental to be paid alike whether the land be cultivated with inferior crops or used only for *ráb* and pasture."

7. In all later surveys of the Thána District these instructions were observed, and the *varkas* lands of Nasrápur (Karjat) were subsequently measured in the same way in 1875-76. Large areas of *varkas* lands were accordingly assessed and allotted to individual cultivators, to be held by them under the ordinary tenure of a survey occupant. These lands were measured off as a rule in blocks of from fifteen to five hundred acres. No attempt was made in the earlier surveys to measure separately or in any way define the particular plots of land in each *varkas* block or survey number, held by different cultivators. Their shares of the assessment were stated, according to the usual native mode of indicating proportional parts, as being so many annas or pies in the rupee, after a rough calculation of the probable area occupied by each sharer. To define them by actual boundaries would have involved much labour and expense, and would probably have been impracticable, owing to the very imperfect knowledge of the cultivators themselves as to their own boundaries. In the later survey of the Karjat *táluka* attempts were made to define by field measurements the actual area held by each co-sharer, and the boundaries of these sub-divisions were indicated in the special maps of the different survey numbers attached to the village registers. But no field boundary-marks were put up, and it is extremely doubtful, we believe, if these sub-divisions, as shown in the maps, correspond with any accuracy with the actual possession of the different cultivators.

The survey allotments did not include all the lands previously used by the people for *ráb* purposes.

8. It seems very clear however from the evidence before us, that although a great deal of *varkas* land, aggregating in the whole district to about 654,725 acres, was, under the instructions quoted above, converted into survey occupancies, much of the *shindád* land from which the cultivators drew their supplies of *ráb* from some cause or another remained as unassessed communal waste. This was no doubt contrary to the original intention, and does not at the time appear to have been generally understood. The Forest Committee of 1863, of which Colonel Francis was a member, distinctly stated that :—

"The lands appropriated by the village community to the growth of brushwood and grass, used as the *ráb* materials for rice lands, have been recognised by the Survey as part of the rayats' holding. All lands of the kind have been measured off into separate survey numbers or divisions, assessed at fixed rates, and their limits defined with boundary-marks."

Some *shindád* lands were undoubtedly included in the *varkas* allotments, but that many lands of this kind must have been excluded is clear from Colonel Francis' own letter to the Revenue Commissioner eight years later (*vide* Volume II, Exhibit 4, pages 376-377). As this letter gives what is evidently the true explanation of the omission, we quote it here *in extenso* :—

"The Survey and Settlement Commissioner is glad to notice the change which has come over the people of the Shahápur *táluka* in respect of the occupation of *varkas* land. For he can assure the Revenue Commissioner that at the time the Survey Settlement was introduced into the district there was the greatest objection on their part to engage for the cultivation of such lands at a fixed rate. They had hitherto held them subject to payment of rent only in years when under cultivation and were strongly opposed to the regular payment of assessment irrespective of cultivation.

"2. Not only was the right of occupancy in such lands not claimed at the time of the survey, but it was ignored in many cases, the chief object of the people being to have the land included in the *gáirán*; for it was supposed they would thus have the usufruct of it

without the payment of assessment. The undersigned regrets to notice from a pencil remark of the Revenue Commissioner that that officer is under the impression that the Survey Department knowingly included these lands, over which a *quasi* right of occupation is now claimed in the limits of the *gáirán* allotments, with the view of saving trouble and lessening the cost of survey operation. He begs on the part of the Survey to repudiate the idea of any such practice having been resorted to, the non-measurement of such lands being due entirely to the causes above explained."

9. This view finds ample corroboration in the statements of some of the witnesses called by the Memorialists. For instance Witness No. 15 of the Roha *táluka* of Kolába (Vol. II., page 202) states "we were strongly urged by the Survey officers to take up *varkas* or hill land. We only took up lands then actually under cultivation. We did not take up the fallow *varkas* as we did not see what benefit we should derive from it. We refused because we should have had to pay assessment on fallow as well as lands under crops. We could have got as much land allotted to us as we wanted, even all the land now included in forest." The general drift of these statements is no doubt that the cultivators were not asked by the measurers to point out the boundaries of their *shindád* lands, but only of the lands used by them for *varkas* cultivation, and that they were given to understand that their old custom of resorting to the common waste for *ráb* materials would not be interfered with. But it is clear from the admissions of other witnesses that no blame can be attached to the Survey Department in the matter.

10. As we have pointed out in the preamble to our general question on the subject of *shindád* lands (Volume II., page 321), there were no reasons in existence prior to 1863 to lead the Survey officers to make the allotments of *varkas* lands in a niggardly spirit. On the contrary the chief aim and policy of the Survey administration at that period was that as much arable land as possible should be taken up for cultivation. The less waste land the more credit to the Department was the guiding rule of the Survey. In the case of *tálukás* settled after the Committee of 1863 had urged the necessity of forest conservancy and demarcation, it would not be a matter of surprise if the Survey Department had allotted *varkas* lands with less liberality than before. But the evidence of Mr. Pándurang Hari Phátak (Volume II., page 85) shows that these considerations had no effect on the *varkas* allotments which were made in the Dahánu *táluka* in 1866-67. He admits that all the *varkas* land previously in his occupation was entered in his holding, but states that it was not so with others. "Some people", he states, "who knew about the proceedings of the Forest Committee of 1863, saw the necessity of being particularly careful that their *varkas* was not retained by Government at the time of the survey. Those who asserted their claim to the *shindáds* got them measured off at the time, but those who failed to do so lost them."

11. Cultivators would naturally have been ready to get the lands which they ordinarily used for *cultivation* entered in their private holdings, as they no doubt clearly understood that no cultivation would be permitted in waste lands after the introduction of the Survey. But they evidently did not realise, as a rule, the probability of any future restrictions being placed on the use of their *shindád* lands, and therefore saw no necessity to incur the liability to assessment which the assertion of their claims to such lands would entail. The officers who have replied to our question as to whether the allotments of *varkas* lands made at the Survey in Thána can be considered a complete commutation for the *ráb* user previously exercised by the people in the communal waste lands, hold different views on the subject (*vide* Volume II., pages 324—334). But the majority answer the question decidedly in the negative. Mr. Atkins also (*vide* Volume II., page 47) has stated :—

"In all villages in which the amount of *gurcharan* is small and the ordinary *varkas* lands are small in area or comparatively treeless, the *gurcharan* is entirely sliced up into the *shindád vahivát* of individuals. I have no doubt that in many cases the *shindád vahivát* lands were not marked off and entered in the names of the holders as they ought to have been. In some cases the reason was that the people were disinclined to undertake this land on survey tenure and pay assessment for it, and in some cases the reason probably was that the survey officers did not take sufficient trouble to find out which were the *shindád vahivát* lands of individuals. I gather that people were disinclined to undertake these lands in many instances, especially in Kolvan, from a report of Colonel Francis, written about 1870, in

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which, after expressing his joy at hearing on the authority of the Collector that many cultivators in Kolvan wanted to have their *shindád vahivát* lands entered in their names, which lands had not been entered in their names at the Survey, he said that he had done his best to persuade people at the time of the Survey to take up these lands, but had found it very difficult indeed to induce them to do so."

Mr. Loch also in his report on the memorial to the Viceroy (*vide* Volume IV., pages 64-65) writes :—

"In other *tálukás* (*i. e.* except in Karjat the Survey Department marked out the *varkas* land into numbers, assessed it and entered it in the names of the persons who claimed the right to use it: all land which the occupants of rice land pointed out as being theirs by custom either for *shindád* or for *varkas* cultivation was thus divided out. This at least was the theory, as is shown by (Exhibit No. 27 (*b*)) an extract from the Thána Gazetteer describing the proceedings of a Forest Committee which met in 1863. I am afraid however that the actual facts hardly agree with this theory. It is a very common complaint everywhere among the cultivators that all their *shindád* land was not given to them at the Survey, and I think there is some truth in the complaint. In some cases the rayats did not take in what was going on; in some cases they would not take the land, because it was assessed and they hoped to get their *táhál* free from Government land."

It is also an undisputed fact that there are numbers of occupants of rice lands in the Thána and Kolába districts to whom no *varkas* lands at all were allotted at the Survey. The Conference of 1882 estimated that about one-third of the land-holders of the Thána District either held no such land at all or held it in insufficient proportion to their rice lands.

User of waste lands for *ráb* purposes after the introduction of the survey.

12. We have now to ascertain what, if any, provision was made at the survey for allowing cultivators who had either no *shindád* or insufficient *shindád* lands allotted to them to supplement the deficiency in their supply of *ráb* materials from waste lands. We have, in the section devoted to grazing, already given a full account of the treatment of waste lands at the time of the Survey and of the different purposes to which they were then assigned. Most of the waste lands were, as then stated, set apart either exclusively for forests or exclusively for grazing, or for forests and grazing combined. There are no entries, in any of the registers of the Thána villages that we have been able to discover, authorising the lopping of trees for *ráb* in any waste lands, whether forests or common pastures. But as appears from the *evidence* of the *mámlatdárs* of the Roha, Mahád, and Mángáon *tálukás* of Kolába (*vide* Volume II., page 222), this practice was authorised in the case of some lands in those *tálukás*, set apart for forests, and grazing. We are not aware whether these entries in the Kolába registers permitting the lopping of trees in waste lands were common or exceptional. If they are of frequent occurrence in the case of the Kolába district there is no apparent reason for the absence of similar entries in the Thána registers.

13. There is a conflict of evidence as regards the Thána District as to whether it was intended that the lands set apart for forests and grazing combined or for grazing only should be made available also for *ráb*-cutting. The Thána witnesses are, as a rule, very positive in asserting that they were told at the announcement of the survey rates in almost every *táluka* that their former user of waste lands would not be interfered with. But too much reliance cannot be placed on vague and general assertions of this nature. Mr. Atkins has, moreover, shown the improbability of any such general promise having been made, by producing extracts from the records (*vide* Volume II., page 251) proving that the Survey authorities distinctly warned the cultivators of Bassein and Bhivandi by notice "that they were not to cut *ráb* in *gurcharan*, *rán-rakshan gurcharan*, &c., and that all waste land was to be used only for the purpose for which it was set apart." We do not propose, however, to pursue this subject further. There is much to be said on either side. Whatever the *intention*, however, the fact remains that the cultivators, whether authorisedly or not, have with little interruption continued ever since the Survey to lop trees for *ráb* in all their former *shindád* lands, whether the latter are included in their private holdings or in *gurcharan* or other waste lands, or in the tracts specially demarcated as village or 2nd class reserves between the introduction of the Survey and the passing of the Forest Act.

Continuance of the custom of lopping trees for *ráb* in waste lands.

Recognition of the custom.

14. The privilege of cutting *ráb* in village allotments was, moreover, from time to time, clearly recognized. The Committee of 1863 apparently considered

that the allotment of *varkas* lands at the Survey obviated all necessity for making further provision for the exercise of *ráb* privileges in waste or forest lands. Major Waddington also, writing in September 1866, said "it must be remembered that village reserves are not intended to supply *ráb*" (*vide* Mr. Atkins' evidence, Volume II., page 251). But Captain Lloyd's report of 20th August 1866 (Exhibit 3, Volume II., pages 372—376) shows clearly that he, as the officer demarcating the village reserves in the Bhivandi, Murbád, Nasrápur, Kolvan, and Salsette *tálukás*, intended that these reserves should be a source of *ráb* supply :—

"Half the rayats in these districts now look to getting their supply of *ráb* from the village allotments. The question might perhaps be raised.—If the rayats cut down their *ráb* trees when given to them in separate numbers why they should be expected to preserve them when situated in village allotments? But the reasons are plain. In the first case, after obtaining an immediate profit by the sale of the trees, the rayat has a permanent profit by his increased area of cultivation, whilst also he has been able to fall back upon the Government forests for his supply of *ráb*: but in the case of village allotments the rayat has no interest beyond the trees; he cannot cultivate the soil, if cleared, and by the new rules he could get no more *ráb*. Thus in the former case all the circumstances were in favour of his clearing away the trees, but in the latter the immediate gain to be derived from the sale of the trees must be balanced against a permanent loss of *ráb* without any advantage from increased cultivation."

15. The Committee of 1875 also clearly understood that the 2nd class reserves which were to take the place of the old village forests were intended to supply *ráb* materials to the cultivators of the villages which contributed land to these forests. They wrote, (*vide* Exhibit No. 2, paragraphs 15—17, Volume II., page 370) :—

"We now come to forests of the second class from which we must satisfy the existing forest rights of the villages whose lands are included in the reserve."

"The rights in second class forests are as follows :—

1. Right of *ráb*, *i.e.*, the right of cutting branch wood, branches of trees and grass to burn as manure for rice fields."

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"We are aware that in some if not all the *tálukás* of Thána a certain area of *varkas* land was allotted by the Survey to each owner of rice lands for the express purpose of supplying *ráb*. The people have treated these lands so improvidently that they are reported to be exhausted, the trees have all been cut and sold to the Bombay wood merchants and nothing more remains but the grass. We do not recommend that any further concession of *ráb* lands should be made to these people. They are in no worse position than the people of the coast villages who have long since exhausted their supply of tree *ráb* and fuel. If a fresh grant of *varkas* were now made it would be exhausted like the last in a few years and Government would be again called on to make a further grant. Each concession of *ráb varkas* only postpones for a few years the inevitable period when there will be nothing left to give. By interfering at once and insisting on the second class reserves (which will in future be the source of *ráb* and fuel supply) being worked in rotation we ensure a permanent if not an abundant supply, and this is all that is possible where the wasteful improvidence of the people has left so little to preserve."

16 Previous to this, Government had also (*vide* Précis, Volume IV., page 12), in laying down the principles on which forest demarcation should be carried out in Thána, stated that—

"There should be two descriptions of reserves, one in which the cutting of *ráb* and firewood and the grazing of cattle may be permitted, and the other into which the foot of man and beast should as far as possible be prevented from entering except with the permission of the Forest Department."

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"Where ash-manure is ordinarily procurable from trees in people's own lands or from grass or cowdung, access to the reserves for *ráb* should not be permitted; but where such is not the case it will be the duty of the officers selecting the reserves to provide for it by setting aside definite portions of reserves, or in any other way that may appear feasible."

It is not therefore of much practical importance for us to know whether the Survey authorities intended that no *ráb* materials should be taken from the lands set apart by them for forests and grazing; for we have, in the subsequent regulations made for the use of the village reserves, which were mostly composed of

the *rán rakshan gurcharan* lands, the clearest possible evidence that the *varkas* allotments made by the Survey were insufficient to meet the entire *ráb* demand of the villages in the vicinity of forests.

Greater demand for *ráb*, owing to increase of rice cultivation, and improvident destruction of trees in occupied lands

17. It is not improbable indeed that fresh areas not formerly used for the purpose have been laid under contribution to satisfy the *ráb* demand. On the one hand rice cultivation is known to have largely increased since the Survey, and on the other it is undisputed even by the Memorialists themselves, that the *ráb* supply available from private holdings has been greatly diminished by the improvident destruction of trees in such lands. This clearance of the tree-growth of occupied lands to which the conditions of the Survey Settlement offered no obstacle, except in the Sanján and Kolvan *tálukás*, has been greatly stimulated by the increasing external demand for wood, and the facilities for exporting it. The result naturally is that where there are forests within reach of cultivation, the rayats are more dependent on the former for their *ráb* supply than ever, and that where there are no accessible forests to supplement the deficiency, and they have had in consequence to resort to less profitable modes of cultivation, the productiveness of the rice lands has diminished. Captain Lloyd wrote in 1866 :—

"These cases, *viz.*, the demand for land for cultivation, the value of wood in the market, added to the ownership of the trees being in the hands of the rayats, have combined to bring about the wholesale clearance of *ráb* numbers, which is now being actively carried out all over the districts."

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"The result of all this clearance is that the area of cultivation and consequent consumption of *ráb* is greatly increased, whereas the supply no longer exists; a flood of petitions is now pouring in upon the authorities applying for fresh numbers, whilst meanwhile the Government forests are plundered".

Orders and policy of Government between the introduction of the Survey and the passing of the Forest Act.

18. We think it unnecessary to notice in detail the numerous orders passed either by Government or the local authorities regulating the taking of *ráb* materials from forest or waste lands between the introduction of the Survey and the passing of the Forest Act. The Précis of correspondence (Volume IV., pages 1 to 21) sufficiently indicates the general policy of Government in the matter, and describes all measures of any real importance taken in furtherance of that policy. The general conclusion to be drawn from a study of the forest history of this period is that the necessity for restricting the practice of lopping trees for *ráb* within the narrowest possible limits in the interests of forest conservancy was consistently and frequently asserted, but that directly any steps were taken to give practical effect to these declarations of policy, temporary concessions inevitably followed, which restored the *status quo ante*, and prevented any serious inconvenience or remonstrance from the people. The result was, as we have already stated, that the rayats everywhere continued to lop trees as before in the *gurcharans* and the village or second class reserves, in which a great part of their former *shindád* lands had been included.

New policy adopted in 1878

19. A new departure, however, took place shortly after the passing of the Forest Act in 1878. The first note of the new policy was struck by the publication of a minute by Sir Richard Temple on the 19th July 1878. Sir Richard Temple wrote :—

"It is of course important to prevent the cutting of live-wood for ash-manure (*ráb*) within any of the Reserved Forests which have been, or may yet be, formed. This ash-manure is indeed necessary for the rice cultivation and for maintaining the richness of the soil in the cultivated plots. But after the exclusion of the reserved areas there would still remain large quantities of waste on which the people may cut *ráb*. The Collector may, by duly considering the requirements of each village, manage to form extensive Reserved Forests, while providing all that can properly be needed for ash-manure. Care must be taken to prevent the orders being misinterpreted as preventing *ráb* altogether. So long as it does not transgress the principles which we establish, it is rather indeed to be encouraged. Doubtless the local authorities bear in mind that while the collecting of grass, dead-wood, and fallen leaves for *ráb* is very proper, the cutting of live-wood, of seedlings, and the like for this purpose is very objectionable as being a wasteful and destructive process. While encouraging *ráb* in its legitimate form, they should carefully discourage the abuses to which it is subject."

20. The principles of demarcation, therefore, as laid down by Sir Richard Temple, involved (1) the formation of extensive Reserved forests, and (2) the

prohibition of all cutting of live-wood for ash-manure within those forests. It was no doubt contemplated by Sir Richard Temple, that in forming these extensive reserves the *ráb* requirements of each village would be duly considered. But it will be noted that he assumes the available supply of grass, dead-wood, leaves, and cowdung, though the latter material is not mentioned, to be sufficient to meet these requirements without the addition of loppings from trees. Our enquiries have, however, led us to the conclusion that grass and leaves, although useful auxiliaries in preparing seed-beds for rice cultivation, cannot be generally obtained in sufficient quantities and within a reasonable distance from the fields, to take the place altogether of tree loppings.

Notifications of waste lands as Reserved and Protected forests in 1879.

21. We must now examine carefully the practical results as regards the *ráb* supply of the new policy thus inaugurated. In submitting lists of forest and waste lands to be notified as Reserved and Protected forests under section 34 of the new Act, the Collector of Thána wrote as follows :—

"In Reserved forests we have included all lands already demarcated as 1st class reserve and all those marked off as forests by the Survey Department."

"In Protected forest we have taken the remainder of the unoccupied unassessed waste area, and included also assessed *kuran* land. This area comprises 2nd class reserves demarcated by special officers and set aside by the Survey Department, as well as land entered in the village registers as *gurcharan*, *ránrakshan gurcharan* (forest in which free grazing is allowed), *parigh* (unassessed waste land), *khájan* (salt marsh land), and *kuran*, assessed and unassessed."

"From the proposed Protected forests we anticipate that a considerable area of land will eventually be demarcated into Reserved forest. It will comprise so much of the Protected forest as is in excess of the area necessary for the exercise of forest privileges, and of that required by the Revenue Department for exchange for lands to be taken up in forest blocks and for extending cultivation, especially in the *tálukás* of Máhim and Dahánu. Where no demarcation has been made, but where it is clear that the numbers will have to be so divided, we have put the whole number into Protected forest for subsequent division into 'Reserved' and 'Protected'".

22. The notification of these lands as Reserved and Protected forests on the 1st March 1879 does not appear to have had any immediate effect in curtailing the *ráb* privileges previously enjoyed by the people in the *gurcharan* and village forest areas thus provisionally notified as Protected forests. About the time the lists were notified Government issued (*vide* Précis, paragraph 31) the following orders on the subject of *ráb* :—

"The cultivators must undoubtedly have *ráb* and it will be the duty of the Forest officers to make arrangements accordingly. If a sufficiency of *ráb* cannot be obtained from grass and fallen leaves, &c., the cultivators must be allowed, under proper supervision, to cut it in a portion of the Government forests. The Forest officers must take every precaution to guard against the abuse of this necessary concession. Access to the reserves should be permitted in rotation, one portion at a time being entirely closed. The question of the exact proportion to be so closed should be left for settlement by the Conservator in communication with the district officers."

Results of the recommendations of the Forest Conference of 1882.

23. It was not until three years afterwards that any actual measures leading to a serious diminution in the *ráb* supply of the forest villagers were taken. There is no doubt, however, that the wholesale notification of all the former *gurcharan* and village reserves as forests under the Act, and the decisions of the Forest Settlement Officers declaring such lands to be free of rights must have caused much anxiety in the minds of the local residents during this period as to the ultimate consequence of the new forest policy. In October 1882, a Committee of Revenue and Forest officers assembled at Thána to consider the various forest questions then pressing for settlement. The results of their recommendations, so far as they affected the *ráb* supply, are thus summed up in the Précis :—

(1) "All hill ranges and large forest blocks should be constituted Reserved forests, and not be divided into Reserved and Protected forests as at present, as the wants of the people can be better met when the entire area of the more important forests is worked under one system and properly conserved and blocked."

(2) "Only such detached hill numbers, of sufficient area, as may be so situated as to come conveniently within the limits of a forest beat, should be retained as Protected forest."

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(3) "*Ráb* should only be permitted under the following restrictions: no cutting or lopping of trees to obtain materials for *ráb* should be allowed, but the cultivators should be permitted to collect dead leaves, grass, and reeds in the unclosed portions of the reserves, and the Forest Department should provide them with facilities for procuring at conveniently situated depôts such additional supplies of materials for *ráb* as they may require on payment of a fixed and very moderate price.

Proposed restriction of *ráb* privileges in forests.

24. This Committee further expressed their opinion on the necessity of restricting *ráb* privileges in the following words:—"The Committee are of opinion that the various circular orders that have been issued in the district giving the rayats the privilege of cutting *táhál* or *shindád* for *ráb* in *gurcharan* and *gávbhág* forest without payment must be considered to have been at variance with the expressed wishes and policy of Government. For this reason and for the additional reasons stated below, they recommend that the privilege be now stopped elsewhere than in assessed *varkas* lands. These reasons are:—

1. *Táhál* or *shindád* is not absolutely necessary as manure for rice nurseries, and in many parts of the district is never used for the purpose. Where both are available cowdung *rábing* is preferred by the better and more industrious classes of cultivators.

2. The impossibility of conserving forests where *táhál* cutting is allowed.

3. The direct incentive given to those cultivators who hold *varkas* land to cut down and sell to the dealer the trees on the land, and fall back on the free supply of *tahál* obtainable from the Government jungles.

4. The assessment of the privilege will induce the holders of *varkas* to utilise the land for its proper purposes, and will give a local marketable value to such excess supply of material as they may be able to produce."

It will be seen from what we have stated in paragraph 2, that the first reason for restricting *ráb* privileges advanced by the Committee of 1882, is in distinct variance with the conclusion we have drawn from the evidence before us.

Approval by Government of the new principles of demarcation laid down in 1882.

25. Government in their Resolution No. 3829 of the 18th May 1883 approved of the demarcation of the forests in the manner suggested by the Committee, remarking that "the result will be, and is intended to be, a material curtailment of privileges, and it will be necessary to take care that privileges now enjoyed are not stopped too abruptly, so as to inflict hardship and cause complaint." It is necessary to state however that all orders as regards privileges in forests passed on the report of this Forest Conference were purely provisional. "No final instructions" it was stated "can be issued pending the receipt of the detailed report and recommendations of the Forest Settlment Officer for each *táluka*. It is for the Forest Settlement Officer to adjudicate on all claims preferred to rights, and the orders now given cannot be regarded as affecting those rights if proved to exist." The proposals of the Committee as regards *ráb* were also provisionally approved, and the same privileges that had been already granted in this respect in Kolába under Government Resolution No. 1203 of 14th February 1883, were given in Thána. The privileges are thus described:—

"It will, in the opinion of His Excellency the Governor in Council, suffice if the cultivators in forest villages are allowed to cut and collect for *ráb* for their own use in the Government forests free of charge grass, reeds, dead leaves, the ten classes of shrubs enumerated by the Forest Settlement Officer, and generally all brushwood of no value for other purposes. This privilege may be exercised only in the unclosed portion of the forest, except when the Forest Department officers consider that it can be permitted without injury in the closed portion also. The lopping of trees cannot be allowed, nor is there any reason why the inhabitants of villages in which no lands are included in forests should be permitted to take *ráb* materials from the Government forests. The cultivators in the latter class of villages must procure their *ráb* from their own *varkas* or other lands: they clearly have no claim to collect it in Government forests. In the case of the forest villages there is in the opinion of the Governor in Council, no objection to allowing the cultivators of a village to obtain the materials the cutting of which for *ráb* is sanctioned from any part of the unclosed area of the forest block in which are included the forest lands of their village."

26. It is evident that the demarcation of forests on the principles thus laid down involved a wide departure from the course which the Collector believed would be followed when he submitted the lists of forest lands for

notification in 1879. Mr. Jervoise anticipated that only so much of the Protected forest as was in excess of the area necessary for the exercise of forest privileges would be finally included in the Reserved forests. This indeed was the principle which had guided all former demarcations, *viz.*, the division of the forest lands into two classes, on one of which the wants of the residents would be a first charge, while the other would be held free of all local obligations. The policy of 1882 also contemplated the division of the forests into two classes, Reserved and Protected, but the division was to be made on an entirely different principle. The idea of setting apart forest lands exclusively for local supply was abandoned. *Area and natural features were henceforth alone to determine whether lands should be Reserved forests,* in the belief that the wants of the people could be better supplied by bringing the entire forest area under one system of working, than by setting apart special areas for this purpose. No forests of sufficient area or importance to be made Reserved forests were to remain as Protected forests. *In other words local supply was no longer to be a factor in the demarcation.*

Comparison of the system of demarcation adopted in 1882, with the previous system.

Local supply no longer a factor in forest demarcation.

27. In the preceding section dealing with the local supply of firewood timber, &c., we have stated our opinion that no hard and fast rule can be laid down as to the manner in which demarcation should be effected. In the wilder parts of the Konkan, such as the Mokháda sub-division, where the forest area is large and the local demand very limited, a complete separation of Imperial from village forests is both practicable and desirable. After forming large and compact blocks of Reserved forests in such tracts to be brought under the strictest conservancy, an ample area will remain from which the wants of the resident population can be fully satisfied. But in other tracts the pressure of population, and the limited area and resources of the forests are conditions which make a demarcation of forests on the above principle inexpedient if not impossible. In such cases the plan recommended by the Committee of 1882 is the only one which gives any guarantee for the permanent preservation of the forests. But the necessity of working all important forests in such tracts under one system and the consequent absorption in the Reserved forests of all the former village allotments, imposes, we think, a very strong obligation on Government to provide, by liberal forest regulations, that whatever reasonable local wants have hitherto been supplied from the *gurcharan* and village reserves shall, so far as the resources at their disposal will permit, be met in future from the Reserved forests in which they have been incorporated.

Obligations imposed by the new system.

28. If the new forest regulations give a reasonable equivalent for the privileges formerly exercised in the village allotments or 2nd class reserves, the people will nowhere have good grounds to complain of the new departure taken since 1882. We must now consider how far these conditions have been fulfilled as regards the *ráb* supply by the arrangements sanctioned in the *tálukás* of which the forest settlement is complete, and in which the demarcation has presumably been effected on the principles laid down in 1882.

Ráb privileges in forests of the settled *tálukás* under existing arrangements.

29. We find from the Collector of Thána's Circular of the 30th October 1885 that the following privileges of collecting *ráb* material in forests have been granted generally in the settled *tálukás* of that district. The privileges here enumerated are substantially the same as those allowed in the settled *tálukás* of Kolába. They are founded in fact on the original orders passed on the Forest Settlement reports of the Alibág and Panvel *tálukás*, and whatever additional concessions have since been made apply equally to those *tálukás*. We quote the paragraphs referring to *ráb* privileges in full :—

"4. Inhabitants of forest villages may take, free of charge, for their own use, from the unclosed portions, and with the permission of the Divisional Forest Officer, from the closed portions also of the Reserved forests, grass, reeds, and leaves (other than *tembhurni* and *áptá*).

1. *Korinda.*
2. *Ukshi.*
3. *Babuli.*
4. *Kuda.*
5. *Kála Kuda.*
6. *Gometi.*
7. *Kevni.*
8. *Torni.*
9. *Bhurjámbhul.*
10. *Bhokar.*
11. *Atharun.*
12. *Kude.*
13. *Mástodi.*

"5. They may also cut for *ráb* the 13 varieties of shrubs noted in the margin, and generally all brushwood of no value for any other purpose. But no trees of any description are to be lopped for *ráb* in the Reserved forests.

"6. The Reserved forest blocks (when finally demarcated) will be divided into a number of compartments, of which one or more will be cleared yearly, the timber being felled for

sale and then closed for a period of years. The inhabitants of forest villages in which the block is situated, and of adjacent villages in whose forest blocks no cuttings are in that year being effected, will be permitted to cut and remove not only the brushwood, &c., in the compartment in which the trees are being felled, but also both before and after the trees have been felled to lop and take all the twigs, branches, and small boughs not required by the Forest Department, for manufacture into fuel. Care will be taken to give the villagers timely notice beforehand when and where the cuttings will take place, and the date of the cuttings will be arranged as far as possible, so that it shall coincide with the time for preparing and burning *ráb*.

"7. Inhabitants of villages in which there are Protected forests, may, in addition to cutting grass, reeds, leaves, (except *tembhurni* and *ápta*) and brushwood as above, may lop for *ráb* in the unclosed portion of such forests, the side branches, but not the leading shoots, of all but the trees marginally noted. The restrictions imposed on the lopping of *ain*, *dhávda*, *bonda*, and *nána* by former orders have now been removed by Government Resolution No. 3890 of 14th May 1885, para. 13, and Government Resolution No. 5880 of 20th July 1885, para. 3, in all the settled *tálukás*. Large branches for firewood must not be cut under cover of the above privileges.

1. Teak.	13. *Kinjal.*
2. Blackwood.	14 *Kinai.*
3. Bamboo.	15. *Humbh.*
4. *Hed.*	16. *Bábhul.*
5. *Kalam.*	17. *Moho.*
6. *Asána.*	18. Mango.
7. *Bibla.*	19. Tamarind.
8. *Khdir.*	20. *Jámbhul.*
9. *Shivan.*	21. *Phanas.*
10. *Tivas.*	22. *Tembhurni.*
11. *Koshimb.*	23. *Palas.*
12. *Jámbhu.*	24. *A'pta.*

"8. These privileges, both as regards Reserved and Protected forests, have been extended to non-resident holders of land in each forest village, and they may take from the forest lands of the village materials for *ráb* for their land situated in the village, but not for any land they may hold in any other village.

"9. But the privileges thus accorded to the inhabitants of forest villages, and to non-resident holders of land within the limits of forest villages are not to be shared by the inhabitants of non-forest villages. If the latter are unable to obtain from the *varkas* lands comprised in their holdings, or from the *gurcharan* lands, if any, in their villages in which lopping for *ráb* is allowed under certain restrictions, a sufficient supply of materials for *ráb*, they must procure what they require by purchase from the Forest Department or private dealers."

Special privileges in Bhivandi, Bassein and Kalyán.

30. These orders apply to all the settled *tálukás* of Thána and Kolába, *viz.*, Alibág, Panvel, Salsette, Bhivandi, Karjat, Kalyán, and Bassein. But in Bhivandi, Bassein, and Kalyán some further special concessions have been made. In Bhivandi, as the proportion of occupied *varkas* land to rice land is comparatively small and much of the former only produces grass, and as the population is numerous and the forest area considerable, the forest villagers are allowed to cut branches of any trees except teak, blackwood, sandalwood and fruit trees for *ráb* purposes in all unclosed Protected forests. The branches of saplings and young trees may also, if necessary, be lopped; but in no case must the leading shoot be injured, and large branches to serve as firewood must not be cut under cover of this privilege. In Bassein the same extended privileges as regards *ráb*-cutting in Protected forests have been granted, and in addition the inhabitants of thirteen specified villages are allowed, in consideration of the small area of occupied *varkas* land held by them, to exercise these extended privileges in one-third of the Reserved forest area of each village, as well as in the unclosed Protected forests. In Kalyán also special concessions have been made as regards the trees which may be lopped for *ráb* in the Protected forests, the list of the reserved trees being reduced from twenty-four to ten species. On the other hand the *ráb* privileges generally granted in Protected forests are withheld in the case of the Protected forests of the Mátherán plateau of the Karjat *táluka*.

Existing regulations as regards *ráb* privileges in forests in *tálukás* of which the forest settlement is still incomplete.

31. In the *tálukás* of which the forest settlement is still incomplete, the rayats of the Thána District are now subjected to no restrictions as regards *ráb*-cutting of which they can justly complain. But the strict regulations in force in those *tálukás* from 1883 up to the beginning of the present year, have, we think, been such as to give reasonable grounds for popular dissatisfaction. By the circular issued on the 29th November 1883, on the recommendation of the Conference which assembled in that year, the inhabitants of forest villages in all the *tálukás* were allowed to cut grass (except when specially reserved and sold by auction) and reeds, and gather leaves other than *ápta*, *tembhurni* and *palas*, and certain shrubs worthless for other purposes than *ráb*, from all forests. In Reserved forests no trees were allowed to be lopped. In Protected forests they might lop trees from the 1st December to the 31st March, subject, however, to the reservation of twenty-eight species. Of these twenty-eight trees twenty-

four are enumerated in paragraph 7 of the Collector's circular quoted above. The remaining four are *ain, dhávda, bonda,* and *nána, the particular trees which the evidence shows to be the chief source of the supply of tree ráb throughout the greater part of the Thána District.*

Difficulty of enforcing the restrictions in force from 1882 to 1885

32. When it is considered that the area provisionally notified as Protected forest in these *tálukás* comprised not only the 2nd class reserves demarcated by special officers and set aside by the Survey Department, but also the lands entered in the village registers as *gurcharan* (free grazing land), *ránrakshan gurcharan* (forest in which free grazing is allowed), *parigh* (unassessed waste land), *khájan* (salt-marsh land), and *kuran* (meadow lands), it is evident that the restriction imposed, if effectually enforced, must have led to a serious diminution in the former *ráb*-supply. The evidence shows clearly that the attempt to enforce these severe restrictions not only failed to effect the object in view, but had a distinctly demoralising effect. Numerous criminal prosecutions were instituted, and many cultivators were fined or imprisoned for disobeying the orders. The High Court, however, in reviewing some of these cases ruled that breaches of these executive orders in the case of lands in which claims to rights had not been settled, did not constitute offences under the Penal Code or the Forest Act, and accordingly reversed the convictions. The only alternative then left to the district officers was to levy the value of all *ráb* material unauthorizedly cut, under the provisions of Section 41 of the Land Revenue Code. The inquiries necessitated by this procedure led to further confusion and complaints. Unauthorized cuttings in the forests were seldom if ever detected until the tree-loppings had been burnt on the seed beds, and then it was too late to ascertain even the total quantity of such material consumed, much less to find out how much was obtained from the forests, and how much from other sources, or how much of the material got from forests was the produce of the trees of which the lopping was prohibited.

33. This very unsatisfactory state of affairs was, however, fortunately remedied by the concessions made by Government on the recommendation of the Collector of Thána, in their Resolution No. 555 of the 23rd January 1886 (*vide* Volume IV., page 197). By these orders the privilege of lopping *ain, dhávda, bonda,* and *nána* trees in Protected forests was granted to the forest villagers of the unsettled *tálukás* "on the distinct understanding that the privilege thus accorded is liable to be limited or withdrawn altogether where the forest demarcation and settlement is carried out, and is not to be regarded as fixed and permanent." The privilege is further limited by the usual stipulation that the leading shoots of trees are on no account to be touched and that no branch thicker than a man's wrist is to be cut, and that young seedlings or saplings or shoots from old roots less than nine feet in height are to be left untouched. As the four trees in question are those which are most valued by the *ráb*-cutter, and are by far the commonest varieties found in the Thána forest lands, this concession is a very substantial one and will remove all reasonable grounds of complaints on the subject of *ráb*-supply pending the final demarcation of the forests of these *tálukás.* Most of the lands in which these privileges are now exercised will, in all probability, be excluded from the Reserved forests when finally settled, and if it is considered necessary to retain any of these areas in forests reasonable arrangements will, no doubt, be made after an inquiry into the wants and circumstances of each village, which will prevent any loss or inconvenience to the villagers.

Sufficiency or otherwise of existing *ráb* privileges in the forests of the settled *tálukás.*

34. In calculating the sufficiency or otherwise of the provision made by the orders above described for each village affected by them in the settled *tálukás,* many factors have to be taken into account, some of which are known and some of which are at present unknown quantities. We can ascertain, for instance, as regards each forest village, the area of Reserved and Protected forests respectively, the area of rice land and the area of occupied *varkas* land. We can also find out the area of communal waste land which has been excluded from forests and in which the collection of *ráb* materials can be and is allowed so far as there is any supply available therein. We can calculate with a fair approach to accuracy the area of well wooded land required to yield a permanent supply of *ráb* materials, sufficient, with the addition of all the cowdung ordinarily obtainable by a cultivator, for an acre of rice land. But we cannot ascertain the present condition of the occupied *varkas* lands, or

of the waste lands, if any, excluded from forests, as a source of *ráb* supply; nor, for the reason that the Survey has failed to perpetuate the former distinction between *shinddd*, *varkas*, and *khap* lands, can we now ascertain what proportion, if any, of the area included in *varkas* holdings can equitably be classed as *shinddd* land, to be set apart exclusively for supplying brushwood and tree-loppings for rice cultivation. We mention here rice cultivation only, because although the seed-beds required for some of the hill grains or *varkas* crops require ash manure for their preparation, as well as the nurseries for rice seedlings, the *ráb* materials for the former can always, as a rule, be obtained from the fallow portions of the lands set apart for *varkas* cultivation. In estimating, however, the area of *shinddd* land in any *varkas* holding which is available for supplying brushwood and tree-loppings for rice seed-beds, the whole of the area under periodical *varkas* cultivation must be excluded from the calculation.

35. Another important factor is the proportion of forest, which under the regulations in force will be open at any given time for the collection of the different *ráb* materials. The proportions which may be closed in the different blocks have been fixed according to local circumstances. In the case of certain *bábhul* reserves in Salsette and in five villages in Kalyán the whole of the Reserved forest area may be closed. In other cases the proportion varies from one-sixth to one-half. In some of the blocks of Protected forests no closure is permitted, while in others from one-tenth to one-half may be closed. These arrangements, however, must necessarily be provisional and dependent to a great extent on the requirements of future working plans.

Ráb statistics.

36. We give below a statement which we have prepared from the statistics available to us, showing (1) name of each settled *táluka*, (2) the number of forest villages, (3) total area of sweet rice land, (4) total area of occupied *varkas*, (5) area of *varkas* land under annual cultivation, (6) proportion of total occupied *varkas* area to rice land, (7) total area of unassessed waste land, (8) area of former *gurcharan* and *ránrakshan gurcharan*, (9) area of Reserved forest, (10) area of Protected forest, (11) total area of forests, (12) area of *gurcharan* lands, &c., included in forest, (13) area of unassessed waste land excluded from forests :—

Táluka.	Number of Forest Villages.	Total Area of Sweet Rice Land.	Total Area of Occupied *Varkas*.	Area of *Varkas* Land under Annual Cultivation.	Proportion of total Occupied *Varkas* Area to Rice Land.	Total Area of unassessed Waste Land.	Area of former *gurcharan* and *ránrakshan gurcharan*.	Area of Reserved Forest.
1	2	3	4	5	6	7	8	9
		Acres.	Acres.	Acres.		Acres.	Acres.	Acres.
Kalyán	47	6,311	18,230	3,766	2·8	22,366	13,436	13,138
Bassein	18	3,438	3,265	684	·9	19,976	5,403	8,040
Salsette	32	7,755	6,824	170	·8 to 1	26,675	9,720	12,625
Karjat	33	5,196	8,140	1,141	1·5	17,275	3,862	6,400
Bhivandi	121	20,629	25,915	7,035	1·2	48,475	26,331	24,314
Total ..	251	43,329	62,374	12,796	1·4	1,34,767	58,752	64,517

Táluka.	Area of Protected Forest.	Total Area of Forest.	Area of *gurcharan* Lands, &c., included in Forest.	Area of unassessed Waste Land excluded from Forest.	REMARKS.
1	10	11	12	13	14
	Acres.	Acres.	Acres.	Acres.	
Kalyán	2,449	*a* 15,587	6,232	9,275	*a* This includes 2,496 acres of assessed waste.
Bassein	3,045	*b* 11,085	1,511	8,950	*b* This includes 65 acres of assessed waste.
Salsette	556	13,181	4,015	13,494	
Karjat	2,978	*c* 9,378	3,229	7,973	*c* This includes 76 acres of assessed waste.
Bhivandi	7,777	*d* 32,091	19,008	16,857	*d* This includes 473 acres of assessed waste.
Total ...	16,805	81,322	33,995	56,555	

37. It will be seen from the above statement that the total area of occupied *varkas* land, taking the five *tálukás* together, is to the total area of rice land, as 1·4 to 1. Out of this *varkas* area, however, 12,796 acres are annually cropped. Allowing for fallows we may assume that about three times this area or 38,388 acres is periodically cultivated. If we deduct this cultivated area from the total *varkas* area, there remain 23,986 acres only of *varkas* land to supply *ráb* materials to 43,329 acres of rice land. In other words, for every acre of rice land, there is little more than half an acre of *varkas*. Our inquiries lead us to believe that not less than one acre of well wooded *varkas* land is required to supply permanently the tree-loppings necessary for an equal area of rice cultivation, presuming that the cow-dung and other materials such as grass, leaves, &c, ordinarily available are fully utilised. If this estimate is correct it is clear that the occupied *shindád* lands of these *tálukás*, however carefully and economically used, cannot supply tree *ráb* for more than half the rice cultivation. About 24,000 acres roughly speaking of well wooded land will, therefore, be necessary to supplement the area of *shindád* land now included in private *varkas* holdings. Deducting the area of *gurcharan* land included in forests as shown in column 12 from the total area of former *gurcharan* shown in column 8, there remains a balance of nearly 25,000 acres which is available for village use both as pasture and *ráb* land. Column No. 13 shows the total waste area excluded from forest to be 56,555; but this area includes village sites, roads, streams, *nálás*, &c., which obviously cannot be considered as sources of *ráb* supply. If the 25,000 acres of excluded *gurcharan* were well wooded, and if the area were evenly distributed amongst the different villages in exact proportion to their wants, the local *ráb* demand could, we believe, be fully supplied without allowing anything to be taken from the forests, except grass. A certain proportion of this land is probably suitable for the growth of *ráb* plantations. Whatever supply of *ráb* materials may be available from such lands should of course be fully utilized before the forests are laid under contribution. But we infer from the fact that these lands have been excluded from Protected as well as Reserved forests either that they are isolated plots of too insignificant area to repay conservancy, or that they contain no tree growth worth preserving. The exclusion of these lands from forests cannot at present be assumed to give the people a fair equivalent for the *shindád* lands which have been absorbed in the forests.

38. The Forest Settlement Officers have, no doubt, in making their recommendations, taken, as far as was possible, all the circumstances mentioned in paragraphs 31 and 32 into consideration, as it was their duty to do. We may presume also that they have considered the effects of the settlement proposed, not only as regards its broad results throughout each entire *táluka*, but also as regards the requirements of each separate forest village. No attempt, however, is made in any of the settlement reports, which we have perused, to prove the sufficiency of the provision made for *ráb* supply even for the forest villages of a *táluka* generally, still less for each village in detail. Had the evidence which we have now collected on the *ráb* question been before those officers when their schemes were being matured, we feel very little doubt that their proposals would have been considerably modified. The provision for *ráb* supply made at the settlement of each *táluka* would no doubt have been ample as regards each village affected, had the *protected* forests corresponded in any degree with the areas formerly included in the *gurcharans* and village allotments; for the privileges now allowed under recent concessions in Protected forests, though not so liberal as a rule as those formerly enjoyed in the 2nd class reserves, are still very substantial ones, as they permit all the trees to be lopped for *ráb*, which are popularly considered most valuable for the purpose.

39. These settlements appear however so far as they affect all *ráb* privileges, to have been made as a rule precisely as if the demarcation had been carried out on the old plan of separating village from Imperial forests, and as if the present Protected forests took the place of the former, whereas the actual distribution of forest lands has, in accordance with the new departure taken in 1882, been effected on a totally different principle.

40. It is possible of course that the provision made by the settlements will be amply sufficient in the case of some villages where the area of occupied

shindád in proportion to rice land is exceptionally large, or the supply of cow-dung abnormally abundant, or where a compartively large area of unassessed waste land has been excluded from forest for some reason or other, or where the forests consist entirely of Protected forests. But from the statistics we have collected we can confidently state that such cases will prove very few in any of the *tálukás* already settled, with the exception of the Mokháda petty division, and that, as a general rule, the privileges of collecting *ráb* material in the forest villages of all *tálukás* demarcated in accordance with the plan approved in 1882 will prove insufficient.

41. Let us take as a good instance in point the demarcation of the village of Kánhor in the Kalyán *táluka* to which Thána Witness No. 28 has called our attention (*vide* Volume II., page 66). From the returns furnished by the *mámlatdár* of Kalyán we find that at the time of the Survey 875 acres in this village were set aside for forests and free grazing combined. At that time there was in addition to this land an area of 199 acres of assessed waste land and 141 acres, of other unassessed waste. The evidence shows that the land set aside as *ránrakshan gurcharan* included more or less of the *shindád* area used by the villagers for *ráb* purposes. Some years after the Survey, 313 acres of the *gurcharan* were marked off as Imperial reserves, leaving the remainder, *viz.*, 562 acres, which presumably included all the *shindád* land of the cultivators, for village use. Under the new demarcation the Reserved forest area is shown as 922 acres. In the same village the area under rice cultivation is 487 acres, while the area of occupied *varkas* land is 596 acres. Of the latter, however, 66 acres were in 1884-85 under cultivation. This means, allowing for fallows, that about 200 acres of the whole *varkas* area are periodically cultivated, while about 300 acres only remain as a source of *ráb* supply for rice cultivation. In other words the maximum area of *shindád* land is to the rice area as 300 : 487, or 1 to 1·62. In such a case the prohibition against lopping trees for *ráb* throughout the entire forest area, as contemplated by the settlement, may reasonably be considered a hardship. The *mámlatdár* of Kalyán (*vide* Volume II., pages 62-63) gives another similar case :—

"Under the new settlement of forests of this *táluka* the area of Protected forests has been too much curtailed, for instance, in the village of Dánbáv, survey No. 29 measuring 442$\frac{1}{5}$ acres is all entered as Reserved forest. At the time of the survey the grazing in this number was allowed free to the village cattle (*jangalche sanrakshan karun gurcharnikade mophat thevla áhe*). The people would be put to inconvenience if free grazing were not allowed in this number. Another inconvenience likely to arise is that the people would be prevented from cutting *táhál* in the portion of the number which was formerly a Protected forest. * * * * * The case of many other villages is the same as that of Dánbáv."

Further inquiry will show, if necessary, that these are not exceptional cases and that a large proportion of the waste lands, on which cultivators have in former years depended for the supply of their *ráb* materials, has been, as a rule, absorbed in the Reserved forests, under the recent demarcations. No other result indeed was possible under the system adopted in 1882.

Supply of *ráb* materials from compartment fellings

42. What do the cultivators whose *shindád* lands have been necessarily included in the Reserved forests get in exchange for their former user? They may take grass, leaves, and shrubs as before from the forests but may not lop a single tree. In lieu of the privilege of lopping trees they are, however, allowed to remove the brushwood and small twigs and branches from the annual fellings of compartments of the forest block to which they have contributed lands, when these fellings take place within their own limits, and when they do not, from any other compartment in the block in which a felling takes place. What is this privilege really worth? As the proportion of any forest block which will be annually felled cannot, under any working plan ensuring a permanency of the supply, probably exceed more than from one-fortieth to one-fiftieth of the whole, it is easy to see that the quantity of tree *ráb* made available annually under this system will be only a very small fraction of what the cultivators have hitherto got by exploiting all the forest area accessible for the purpose. Moreover, whenever the felling for the year is in one corner of a large block of several square miles, the privilege of removing *ráb* materials from it is of no value whatever to the residents of the villages on the opposite side of the block. In fact, taking into account the very small distance to which *ráb* materials can be

profitably carried, the annual fellings in a large block can only be utilized for the purpose by a very small proportion of the cultivators who reside in the villages which have contributed lands to its formation.

Failure of the experiment.

43. The evidence shows that the trial of this plan of supplying *ráb* from fellings in the past season in the Katraj-Sirgáv block of the Kalyán *táluka* has been a complete failure. Witness No. 30 (*vide* Volume II., page 70) to whose evidence on the subject we would call special attention, states as follows :—

"I do not get sufficient *táhál* from my *varkas*. I get grass only. Up till last year I got my *táhál* supply from the survey No. 90 which is now included in forest. I did not get my *táhál* last year from the forest number, because the *pátilki* office is in my family and I did not like to run the risk of losing it by breaking the order of Government; but I had to allow three acres of my *kharif* to lie waste in consequence; I burnt *ráb* beds with what grass could be had from my *varkas*, but the seedlings were very poor. In one acre I had sown paddy without preparing the *ráb*, but the outturn was very indifferent. The average yield of my land is twenty candies, but this year I could get only ten candies out of it. Last year all the trees in a compartment from the Reserved forest of Katraj and Shirgáv were felled by the Forest Department and we were told to remove the loppings. There were not more than about 2,000 trees in all. Out of this 75 to 100 were *ain*, *bonda*, *dhávda*, and *nána*, which were principally useful for *táhál*. From this cutting not more than a hundred head-loads of *táhál* were available. This supply was quite insufficient even for the cultivation of my *kharif* land. I have 40 acres of *shindád* in survey No. 90. From this I cannot get annually 400 head-loads of loppings. About 2,000 to 2,500 head-loads of loppings are obtained annually from the whole of the *gurcharan*. If a tree is cut down the *táhál* to be got from it would only be half the quantity that would be got by lopping it in the usual way while standing, because the leaves and branches cut, are crushed and spoiled by the tree falling. No one availed of the loppings from the felled compartment; all the villagers cut from the *gurcharan* as usual except me. No one would have removed loppings from the compartment even if the material supplied was sufficient, as the *rayats* considered this would destroy their *vahivát* in the *shindád*. I left my three acres fallow rather than take the 100 bundles available, because I would thereby give offence to those from whose *vahivát* lands some of the trees were cut."

44. The witness above quoted no doubt underestimates the actual quantity of *ráb* materials yielded by the fellings. As he clearly states that none of the villagers would have taken advantage of the supply, however ample it might have been, owing to the sentiment that by doing so they would waive their claim to continue their former customs, it was perhaps unnecessary to further justify the action they took by exaggerating the insufficiency of the supply. But making all due allowance for any such exaggeration, there can be no doubt that the system of compartment fellings cannot provide a fair and full equivalent for the supply obtained by the cultivators under their customary practice, either as regards quantity or convenience. Were the period of rotation for *táhál* cutting the same as the period required for timber, such a system might be justified to ensure a permanency of the *ráb* supply. But whereas forty or fifty years must elapse between each felling of a firewood or timber compartment, a similar compartment worked mainly for *ráb* supply on the strictest principles of conservancy would only require a very short interval of rest between the years in which lopping was allowed.

45. The opposition which has been manifested to the compartment felling system as a source of *ráb* supply for forest villagers, could no doubt be overcome with judicious firmness, did it really afford a reasonable equivalent for former privileges. The *mámlatdár* of Kalyán certainly takes a sanguine view of the matter. He states :—"I know the system which has been proposed for *ráb* compartments in Reserved forest blocks as described in Government Resolution No. 3890 of 14th May 1885. Taking into consideration the supply which would be thus available and the other minor privileges for removal of *ráb* material from Reserved forest, I think, if the system is fairly carried out, and the people get in time the material they want and at not too great a distance, the arrangement will work fairly and be a reasonable substitute for the privileges the people enjoyed before in the protected area. * * * I am of opinion that the new settlement will cause some discontent among the people at first, but ultimately it will work smoothly as the people get accustomed to it. During the last season the system of felling by compartments for *ráb* was tried in twelve to fifteen villages. It was thoroughly explained to

the people, but no one took *táhál* from the trees so cut." If all the conditions which the *mámlatdár* assumes could be fulfilled by this system, that is, if the people get *in time the material they want and at not too great a distance*, a reasonable substitute would no doubt be provided for former privileges. But we fail to see how these conditions can possibly be fulfilled by the system above described.

Supply of *ráb* materials at agricultural depôts.
Causes of failure.

46. It is equally clear to us that the conditions above stated cannot be fulfilled by the plan adopted in 1883 (*vide* Mr. Wilkins' evidence, Volume II., page 265) of keeping *táhál* or tree-loppings for sale to cultivators at fixed depôts. Valuable timber can be so stored, and will bear the expense of carriage from the forests to the depôts and from the depôts to the place where it is required. But no cultivators can afford to purchase *ráb* materials in this way. Unless their own labour is utilised both in the collection and carriage of *táhál*, the profits on rice cultivation must be seriously diminished. We are informed by Mr. Wilkins that the rates fixed for a head-load of *táhál* varied at the different depôts from six pies to two annas according to distance. Mr. Ozanne's experiments show that the preparation of the seed-beds for an acre of rice land requires 144 head-loads of freshly cut tree-loppings, each head-load weighing about 60 lbs., as much as a strong man can carry with the aid of a *baila* or carrying pole. The cost to the cultivators of the *ráb* material stored at the depôts would, therefore, have been from Rs. 4-8-0 to Rs. 18 per acre of rice land—a charge equal to from two to eight times the average assessment. In addition to this they would have to bear the expense of carriage from the depôts to the fields, which in many cases must have been considerable. Under these circumstances it would be hopeless and unreasonable to expect cultivators to resort to the depôts for *ráb*.

General conclusion.

47. As we are satisfied from the general evidence before us that the existing supply of *ráb* materials from private holdings and sources other than State forests is, under present circumstances, insufficient to meet the reasonable wants of the cultivators, and that this deficiency cannot in the case of many forest villages be fully met by the exercise of the privileges now allowed in the forests of the settled *tálukás*, we have to consider how the further necessary supply can be made available from the forests with the least injury to conservancy. Various means of effecting this purpose have been discussed in our general question on the subject of *shindád* lands, and the replies of the official witnesses thereto (*vide* Volume II., pages 321 to 334).

Additional provision for *ráb* necessary in forest villages.

48. In the preamble to the question above alluded to we have assumed, as a fact clearly proved by evidence, that considerable areas of *shindád* lands formerly used by the cultivators as a source of *ráb*-supply were for some reason or other treated as waste lands at the introduction of the Survey, instead of being, as was the declared intention of Government, measured off and allotted to the individual occupants, and that much of this area, so treated as waste, has since been incorporated in the Reserved and Protected forests. For this reason, and also because much of the tree-growth on the limited area of *shindád* land which was actually allotted to cultivators has since been improvidently destroyed, we have further assumed that some additional provision, temporary or permanent, will have to be made for meeting the *ráb* demand of the forest villages.

Occupants to whom a sufficient area of *varkas* has already been allotted in proportion to rice cultivation have no claim to *permanent ráb* privileges in the forests, but it may be expedient to make *temporary* concessions in their favour.

49. Occupants to whom a sufficient area of *shindád* land, in proportion to rice cultivation, has already been allotted, have no just claim to exercise *ráb* privileges in the forests. But as their *shindád* lands have been cleared for cultivation and the tree-growth thereon cut and sold for profit under a mistaken idea that the *ráb*-supply thus destroyed will always be made good from the forests, it may be expedient, as a matter of grace, to make temporary concessions which will prevent immediate distress. No permanent provision for their wants is necessary. They have indeed been repeatedly warned that they must depend entirely on their own resources. Some occupants, have no doubt, made praiseworthy efforts to plant and preserve private *ráb* plantations. But, as a rule, the warnings have been disregarded, owing no doubt to a general unbelief in the finality of all forest restrictions. We confidently believe, however, that a reaction in this respect will set in. The measures, which we shall propose in

the chapter dealing with trees in occupied lands, will give a direct encouragement to occupants to set aside portions of their *varkas* lands for the growth of *ráb* materials, and will make it more difficult than it is now for them to cut the unreserved trees in such lands for the export trade. The disposal of the royalty trees to occupants under conditions precluding export or sale for export, as suggested in Chapter VI, will also very materially increase the *ráb* supply available in private holdings. For some few years it will be desirable to allow cultivators to supplement from forests any deficiency of *ráb* materials in their own lands, to give them in fact a reasonable time within which to reboise their denuded *shindád* lands. But in calculating the *permanent* provision for *ráb* which will have to be made from the forests, the case of those occupants, who have already a sufficient area of *shindád* land included in their holdings, need not be considered.

Measures to encourage the preservation of trees in private *shindád* lands.

50. In our question on the subject of *shindád* lands we have pointed out a way in which temporary and gradually contracting *ráb* privileges can be allowed without much risk of permanent injury to the forests. We are justified in assuming that all the trees used for *ráb* purposes, now growing in the old *shindád* lands included in the forests, must be practically worthless as timber, owing to the long course of hacking and lopping to which they have been subjected in past years. If the practice of lopping trees for *ráb*, as usually followed by the rayats, is as destructive as we have reason to believe it is, the existing tree-growth in such lands must *ex hypothesi* be of little or no value as a source of timber-supply. Until these pollarded and mutilated trees have been clean felled, little or no harm can be done by allowing the practice to continue. The supply of firewood will no doubt be diminished to some extent if this concession is made: but as we have pointed out, this is a consideration which need not stand in the way, if the concession is otherwise reasonable and necessary.

Scheme for allowing temporary *ráb* privileges in forests, as first suggested by the Commission.

51. We have described the scheme in the following words :—

"Under the working plan system which will be introduced as soon as the necessary surveys and valuations can be completed, from 40 to 50 years will probably elapse before all the compartments in a forest block have been cleared in their turn and closed for reproduction. As soon as the old growth of trees has been once cut down the privilege of lopping trees for *ráb* will necessarily have to be withdrawn, if the forest is to be made to yield the maximum supply of produce. It is clear, therefore, that under the plan here proposed the privilege will be a gradually contracting one, reaching its vanishing point after some 40 or 50 years, giving its maximum yield to-day, when the occupied *varkas* lands have, it may be hoped, reached their worst stage of denudation, and not being finally extinguished until ample time and opportunity has been given to cultivators to re-clothe their lands with *ráb*-yielding vegetation. Should self-interest be insufficient to induce occupants to plant and preserve trees in their own lands, the measures which will probably be deemed expedient to take to check, either directly or indirectly, the cutting of trees in occupied lands for sale or trade purposes, may be expected to secure the end in view; and by the time the Reserved forests are finally closed against lopping trees for *ráb* the occupied lands should be in a condition,—as indeed they now are as a rule in the villages coming under the Kolvan and Dahánu settlements, which preclude sale of trees by occupants,—to fulfil the chief object of their original allotment, *viz.*, the supply of the necessary *ráb* material for the cultivation of the rice fields with which, by the custom of the country, they are or ought to be inseparably connected."

"By this scheme all cultivators, who now hold a sufficient area of *varkas* land to yield if the tree-growth is preserved, a sufficient supply of *ráb* material, will be *gradually* and rightly thrown on their own resources. At the same time a large quantity of *ráb* material now available in the forests, which would otherwise be wasted, will be turned to profitable account without appreciable injury to the forests, though possibly with a trifling loss of revenue from firewood."

52. It will be seen that this proposal is strongly supported by Messrs. Mackenzie, Loch, and Ebden. Mr. Mackenzie states :—

Official opinions on the proposed scheme.

"I consider the proposal to keep open for *ráb*-cutting the areas now used for that purpose until they shall have been cleared in the ordinary course of forest operations, one which will give considerable relief immediately and for many years to come. The cost to Government will not be great, as the trees are admittedly useless for other purposes than *ráb* or firewood, and the plan will give occupants a fair opportunity to get up a growth of trees suitable for *ráb* on their own *varkas* lands."

Mr. Loch states :—

"I approve of the suggestion that the areas now open to the *ráb*-cutters should remain open to them until they are cleared in the ordinary course of forest operations. This con-

cession would give great temporary relief, and the pecuniary loss to Government would not be heavy."

Mr. Ebden also states :—

"I quite agree with the plan under which the privilege would be allowed to continue temporarily in forest limits pending the recovery of occupied *shindád* lands and the preparation of other provision."

53. Mr. Keyser again does not "believe any arrangement possible which does not admit of *ráb* being taken from Government forests." But he points out that "if the people are to have access now to the whole forest" (a result which we may observe is not contemplated by the proposal made in the question under reply) "and their rights to diminish in geometric proportion by only one-fortieth or one-fiftieth a year, it will be a very long time before they feel the necessity of making any *ráb*-supply for themselves."

Mr. Atkins also considers the proposal suitable in certain cases. He states :—

"The proposed scheme is applicable to a few of the less important of the Kalyán forests. I brought these cases to the notice of Government in my supplementary Kalyán Forest Settlement report, and suggested a scheme like that now proposed, which I have for a long time had in my mind. The scheme is not applicable to my Mokháda demarcation, nor is it to my demarcation of the forests of Shahápur and Murbád. I cannot express an opinion about the *tálukás* demarcated by Mr. Lawrence. The necessity for the adoption of the scheme depends entirely on whether a large portion of the land actually used for and wanted for growing *ráb* material has been included in Reserved forests or not. I prefer not to include it in the wilder parts of the district."

54. On the other hand Messrs. Shuttleworth and Mulock do not admit the necessity of supplementing the *ráb*-supply by allowing any trees to be lopped in the forests. Mr. Shuttleworth further points out the following objections to the proposed scheme:—

"A plan to gradually work out the lopping of trees for *ráb* in the forest, such as is proposed, does not commend itself for several reasons. The forest lands of some villages will necessarily be closed against lopping years before the lands of other villages are closed against it, and this will keep discontent alive, when the inhabitants of the village to which the closed forests belong see the people of other villages close by lopping trees in the forests while they themselves cannot do the same, they will petition and clamour and do exactly as they have been doing for the past 20 or 30 years, and this will increase the difficulty of protecting the compartments to be closed against lopping under the scheme. The scheme postpones instead of grapples with the difficulty. When a restriction is to be applied it should be applied at once equally against all. The supply of firewood will be diminished by the *ráb*-lopping proceedings, and it is highly probable that long before all the sub-divisions of a forest block have come under the axe, the junglewood in the open forests will be destroyed entirely, and some arrangement will consequently have to be made to meet the demands of firewood, and the only arrangement possible will be the cutting of immature trees in the closed blocks. Thus the entire working plan of the forest blocks will be disarranged. Then again no new growth of junglewood will be allowed to come up in the forest open to the lopping of trees, for it will be cut down as fast as it may appear, and the teak tree will suffer also, for it does not thrive unless closely intermixed with other kinds of trees which retain their leaves while it is itself bare of leaves, and thus for another 40 or 50 years improvement will be shelved and deterioration will be going on."

Opinion of the Commission.

55. We may here state that we are of opinion, that instead of allowing certain specified trees to be lopped as proposed in the question by the residents of forest villages in the areas formerly used for the purpose until closure of any such area takes place, it will be better and simpler to allow the same privilege to be exercised, wherever necessary, for a term of years in the open portions of the Reserved forests generally, without any special limitation as to the particular areas formerly frequented for the purpose. The practical result will we believe be the same in either case.

Consideration of the case of occupants who have insufficient or no *shindád* land in their holdings.

56. The immediate wants of occupants, who have a sufficient area of *shindád* land in their private holdings, to supply, if the tree-growth is duly preserved therein in future, whatever tree-loppings they require for *ráb*, can easily be met by temporary concessions in the manner above indicated. It remains, however, to consider how permanent provision can best be made for meeting the *ráb* requirements of occupants, who have insufficient *shindád* land, or no such land at all, included in their holdings. We have thus stated the case of these occupants in the preamble to our question on *shindád* lands :—

"The case however of those occupants of rice lands who hold no *varkas* land at all, or an area insufficient in proportion to their rice cultivation will have to be considered separately. Under the plan proposed such occupants will probably have no difficulty, at any rate for some years to come, in getting *ráb* from the open forest area. But as this area gradually contracts, year by year, such cultivators having no land or insufficient land of their own to resort to, will have to be otherwise provided for. Even after all the compartments in a forest block have been cleared and closed in turn under a working plan, there will probably be no objection to allowing—over the greater portion of the Reserved forest area—the same privileges as regards cutting shrubs and removing grass, reeds, and leaves as are now given. The question is whether the supply of *ráb* material thus available, plus that to be got from the annual compartment fellings, Protected forests if there be any, and other waste lands excluded from forests, will suffice to meet the wants of those who hold no *varkas* or insufficient *varkas* of their own. If their wants can be so met no further allotment of *varkas* lands for *ráb* would be necessary or expedient, and no revision of any recent demarcation work would be required. If on the other hand it should appear that the supply will be insufficient, some additional allotment of *varkas*—to be determined according to the special circumstances of each village and each holding—would clearly be necessary."

Consideration of the question whether additional allotments of *shindád* lands are necessary or not. Conclusion of the Commission that it is inexpedient at present to disturb existing demarcations of forests, in the settled *tálukás* with this object.

57. On the assumption that further allotments of *shindád* lands will be found necessary, we have, as will be seen from the official evidence recorded on the subject, invited the fullest discussion as to the principles on which such allotments should be made, and the precautions which should be taken to guard against the exhaustion of the supply of *ráb* materials in the areas so allotted. After earnest consideration of the general evidence and the replies to the particular question alluded to, we have come to the conclusion that it is inexpedient at present, in the absence of any reliable *data* as to the supply of *ráb* materials now available, or which can be made available in future from private holdings, and more particularly from waste lands excluded from forests, to devote permanently and exclusively for this purpose any portion of the present forest area in the settled *tálukás*, either by supplementing the incomplete work of the Survey and allotting sufficient areas to individual occupants, or by marking off *ráb* forests for communal use. In the *tálukás* of which the demarcation and settlement is yet incomplete, we trust that it will be found possible to exclude altogether from forests such an area of waste land as will, together with the existing *varkas* allotments, fully supply the local *ráb* demand and make the concession of *ráb* privileges in the Reserved forests unnecessary. But as regards the *tálukás* already settled we feel that it would be unwise to disturb the existing demarcation until further experience enables Government to determine with approximate accuracy the actual areas if any which may eventually be necessary to make good any deficiency there may now be in the supply available from private holdings and waste lands excluded from forests.

Absence of reliable *data* as to *ráb*-supply from sources other than forests.

The question of making further *shindád* allotments should be postponed for at least ten years, and in the interval any deficit in the *ráb*-supply from private sources should be made good from the forests.

58. As we have pointed out above in paragraph 34, there are several unknown quantities which make it impossible to pronounce any definite opinion as to the present or future sufficiency of the supply of *ráb* materials available from other sources than forests. The general effect on the *ráb*-supply of the proposals which we shall make later on as regards the trees in occupied lands is also uncertain, though it may be confidently predicted that the drain on the forests for tree-loppings will be materially lessened thereby. We are strongly of opinion, therefore, that it will be better to postpone the question of making any further special allotments of lands now included in settled forests for *ráb* purposes for a further period of at least ten years, and that during this interval whatever deficiency there may be in the supply should be met by allowing the local residents and cultivators of forest villages to lop certain specified trees in the open compartments of the Reserved forests.

Recommendations.

59. We recommend accordingly that for ten years to come a general privilege be accorded, to all residents and cultivators of villages which have contributed lands to forest, to lop certain trees for *ráb* as specified below, in all open compartments of the blocks to which the villages are respectively attached. In the Kolába forests the trees to which the privilege should extend should be those specified by Mr. Sinclair in his No. 100 of 1st April 1886 (*vide* Volume II, pages 396 to 400) *viz* :—

(1) *Ain* (Terminalia tomentosa).
(2) *Kinjal* (T. paniculata).
(3) *Sátvin* (Alstonia scholaris).
(4) *Kát Sávar* (Bombax malabaricum)
(5) *Kumbha* (Careya arborea).

(6) *Umbar* (Ficus glomerata).
(7) *Dhávda* (Anogeissus latifolia).
(8) *Koshimb* (Schleichera trijuga).
(9) *Nána* (Lagerstrœmia lanceolata).
(10) *Bhondaga* (Lagerstrœmia parviflora).

In Thána, local conditions will necessitate some alterations in the above list. The *kinjal* (2), *sátvin* (3), and *kát sávar* (4) should be omitted, and another species, the *kalamb* (Nauclea parvifolia), should be entered in their place. The villagers should be made to understand very clearly that it is not intended that they should help themselves to firewood under cover of this privilege. For *bonâ fide ráb* purposes no branches of more than one inch in diameter are necessary. The privilege should be restricted accordingly, and the leading shoots of the trees should of course be kept intact. The concessions already made to the inhabitants of forest villages as regards the free removal of grass, leaves, reeds, shrubs and brushwood from open reserved forests should at the same time be confirmed and the further privilege granted of removing grass from *closed* reserves as recommended in Chapter IV., Section I., paragraph 81.

Reasons for restricting privilege of lopping trees in forests to the cultivators of forest villages.

60. We do not consider it necessary that the privileges above described should be extended to the cultivators of other than forest villages. Some of the witnesses called by the Memorialists have given evidence as to the custom of the cultivators of one village to resort to the forest of a neighbouring village for tree-loppings for *ráb* as well as firewood. We have no doubt that this custom has been a very common one as regards firewood, for we know that firewood will bear the expense of carriage to long distances. But the cases in which *bonâ fide ráb* materials can be profitably taken from the jungles of one village to the fields of another must of necessity be very exceptional. We have given due consideration to former custom in proposing, in the preceding section, to supply timber and firewood from the annual fellings to villages whose boundaries actually touch and adjoin the boundaries of forest villages, on precisely the same terms as to forest villages. We consider this to be a fair and reasonable settlement of the claims of the non-forest villages as regards firewood. But we cannot recommend a similar settlement of their claims to collect *ráb* materials in the forests. It may be said that no cultivators of non-forest villages would avail themselves of the privilege, if they can get what they want from their own village lands. It is no doubt true that cultivators will not fetch *ráb* materials from a long distance, when they can obtain them close at hand, and will not in any case go more than a few miles to get them. But if the rayats of non-forest villages are allowed to lop trees in the forests at all, there will always be great risk of the privilege being abused by their cutting branches of *firewood* under the guise of *táhál*. It is, we consider, absolutely essential to the success of the scheme we have proposed for the local supply of timber and firewood from annual fellings, that all irregular exploitation of the forests for these commodities should be strictly prevented. Great inconvenience may result if rayats, whose *bonâ fide shindád* lands have been included in the Reserved forests, are not allowed, until other sufficient provision can be made, to continue to lop trees for *ráb*, under certain necessary limitations, in those or equally suitable areas. But we do not consider that sufficient cause has been shown to justify us in recommending that a privilege so liable to abuse as the one in question should be extended to the cultivators of villages from which no *shindád* lands have been taken in forming the forest blocks. If any cultivators residing in non-forest villages have hitherto really depended for their supply of tree-loppings required for *ráb* on the forests of neighbouring villages, their wants in this respect will be fully met by the privilege they will have, under the proposal made in the preceding section, of removing by head-loads all the small branchwood available from the annual fellings either for *ráb* or firewood.

Application of the *ráb* privileges above recommended.

61. The privilege described above should, we think, be conceded as a rule to the cultivators of all the forest villages in the settled *tálukás* of Thána and Kolába in which the demarcation has been effected on the principles laid down in 1882. It will probably be found unnecessary to allow any *ráb* privileges in the Mokháda forests, as exceptional conditions have made it possible to effect an almost complete separation of forests from cultivation in that tract. The area of occupied *varkas* lands available as a source of *ráb* supply is also much greater in Mokháda in comparison with the area of rice cultivation than in any

other part of the Thána District. Similar privileges will be necessary in the forest villages of the *tálukás*, of which the final demarcation has still to be carried out, *if* the *shindád* lands formerly included in *gurchárán* and village reserves are permanently retained as Reserved forests. If these *shindád* lands are excluded, as they probably will be, in tracts like Váda, Murbád, and Shahápur, no such concession will be needed. We have no information as to the proposals for the demarcation of Shahápur and Murbád recently submitted by Mr. Atkins. Judging, however, from his reply to our question on the subject of *shindád* lands, it appears that he does not propose to include any large portion of such lands in the Reserved forests of those *tálukás*. But the question will have to be considered separately with reference to each village, according to local circumstances. It is desirable that the Forest Settlement Officers of Thána and Kolába should be instructed, in submitting their proposals in future for the demarcation of any tract, to make a separate recommendation, as regards each village concerned, as to the necessity or otherwise of conceding similar privileges, and to support their recommendations in every case by giving the fullest information available as to the *ráb* supply. Pending final settlement the *ráb* privileges now allowed in the forests of the unsettled *tálukás*, and described above in paragraph 33, are sufficiently liberal to prevent any immediate inconvenience.

The necessity or otherwise of allowing *ráb* privileges in the forests of the unsettled *tálukás* will depend on the nature of the demarcation.

The *ráb* demand and supply of each village must be considered separately.

62. We would allow all cultivators of the forest villages, to which our proposals are applicable, to exercise the privilege above described, without reference to the area of *shindád* land in each private holding, for the next ten years. The whole question of the supply of *ráb* from forests should then be once more reviewed. By that time all occupants of rice lands, who have a sufficient area of *shindád* land to meet their wants, if the trees are properly conserved, may very justly be thrown entirely on their own resources. With the experience and information gained in this interval Government will be better able to decide than they now are, what further arrangements will be most suitable in the interests of all concerned to meet the *ráb* demand of the rayats of forest villages, who have no *shindád* lands at all, or insufficient lands of that description in proportion to their rice cultivation. There are various ways in which this provision can be made, if it is then found to be absolutely necessary.

The whole question of the *ráb* supply from forests should be reconsidered after 10 years by the light of the further information which will then be available.

(1) Sufficient areas of the forests can be permanently assigned for *ráb* cutting as are the *betta* lands in Kánara, and excluded from the working plans of blocks intended for timber and firewood.

(2) The required areas can be disforested, and privileges therein controlled as in other waste lands excluded from forests under Section 44 of the Land Revenue Code.

(3) Additional allotments of *shindád* lands can be made to individual occupants of rice lands according to their respective needs as proposed in Karjat, under conditions which will ensure the preservation of the tree-growth.

Ways in which permanent provision for *ráb* can be made if found necessary.

63. It will be desirable at any rate that all privileges of lopping trees shall, as soon as possible after the period named, cease in all forests which it is intended to work as timber and firewood reserves. If it is necessary to allow the continuance of the practice for any time after this period, pending the completion of other arrangements, the privilege should be strictly limited to occupants of rice lands who have either no *shindád* lands at all, or insufficient lands of that description in their private holdings. In other words the privilege should then be a *personal* one and not a general one. Until the forests are brought under working plans, and the trees in the areas now or recently used for this purpose are clean felled, and replaced by a fresh growth, no injury will, we think, be done by allowing the old practice to continue. Some years will, no doubt, elapse before working plans can be generally introduced. But the chief object of these plans will be frustrated if the privileges we have recommended to meet immediate wants are *permanently* conceded in any compartments of the forest brought under them. We have no doubt whatever, notwithstanding the attempt of the Memorialists to prove the contrary, that the lopping of trees for *ráb* is incompatible with the working of the forests, so as to produce the maximum supply of timber and firewood.

All privileges of lopping trees for *ráb* should cease after ten years in the forest areas intended to be worked as timber and firewood reserves.

Chapter IV.
SECTION III.
RA'B.

Management of waste lands excluded from forests.

64. In the interval which will thus occur before the final settlement of the question much valuable information may be gained as to the nature of the waste lands which have been excluded from forests, and the proportion of them which can be fairly taken into account in estimating the *ráb* supply of the different villages. Many of these lands which are now denuded and useless for *ráb* purposes can with good management be reboised. We assume that the exercise of all *ráb* and other privileges in them will be regulated by suitable rules under the land Revenue Code, similar to those now in force in the Thána district. It may be found possible in the period during which *ráb* privileges will be temporarily allowed in the forests to close many of those areas for reproduction.

Increased supply of *ráb* from private *shindád* lands expected if the measures advocated in Chapter VI. are carried out.

65. We have also strong hopes that, if the measures to be proposed in detail in Chapter VI. are carried out, the supply of *ráb* from the *varkas* lands already included in private holdings will be materially increased before many years have elapsed. The object is to encourage in every way the preservation of the tree-growth in private *shindád* lands and to undo, as far as possible, without recourse to legislation, the disastrous consequences to agricultural as well as forest interests of the unconditional surrender of the unreserved tree-growth in *varkas* lands at the Survey throughout the greater part of the Thána and Kolába districts. We shall propose that the royalty trees in Thána be offered to occupants at half their market value, on conditions which will preclude export and will ensure that the produce shall be utilised to meet local demands only. If the lands on which these royalty trees are now growing are found to have been uncultivated for ten years or more, and to contain thick tree-growth we shall propose as a further condition of the sale that such lands shall be permanently retained as *shindád* lands, and not cleared for future cultivation, occupants being allowed as a set-off against this restriction a remission of three-fourths of the assessment. We shall also recommend that the reserved trees, other than the royalty trees, in the Sanján and Kolvan *tálukás* of Thána, shall be made over to occupants free of payment on similar conditions. Further, with a view to induce occupants of *varkas* lands not containing royalty trees still belonging to Government, to voluntarily devote suitable portions of them as permanent *shindád* reserves, we shall similarly propose that three-fourths of the assesment shall be remitted in respect of any land which an occupant may agree to set apart for this purpose, under conditions which will prevent the cultivation of the land, or the sale of the trees and grass for export. The effect of these measures will, we trust, be that within the next ten years or so all that portion of the *varkas* land included in private holdings, which can be equitably considered as *shindád* land available for supplying *ráb* material for rice-cultivation, will be permanently devoted to that purpose, and that the temptation to destroy the tree-growth therein to meet the demands of the export trade will be removed. As a further check on improvident cutting of trees in occupied lands, we shall also propose to make the continuance of forest privileges which any individual occupant would otherwise enjoy under our general scheme for local supply, depend on the discretion he may exercise with regard to any right he may now possess of disposing of the unreserved tree-growth in his land in any way he pleases. The measures by which we think this principle can best be enforced will be described in detail in Chapter VI. The evidence before us leads us to believe that the general feeling of the Memorialists is strongly in favour of restricting, as far as possible by all legitimate means, the present drain on the tree-growth of occupied *varkas* lands for trade purposes. We confidently hope therefore that the various measures, which we shall recommend with the object of preserving the tree-growth in private holdings for local domestic and agricultural wants, will bear good fruit, and that when the question of the *ráb* supply of the forest villages again comes up for consideration, it will be found that the private resources of the rayats in this respect have been greatly increased and developed.

Additional allotment of *varkas* lands in Karjat.

66. A partial attempt to supplement the deficiency of the *ráb* supply in private holdings, by making additional allotments of *varkas* lands to occupants of rice lands now holding less than two acres of *varkas* for each acre of rice land, has been recently made in the Karjat *táluka*. The principles under which these allotments were to be carried out are described in paragraph 5 of Government

Resolution No. 8018 of the 10th October 1884 (*vide* Vol. IV., pages 173 to 176). The *mámlatdár* of Karjat (*vide* Vol II., page 17) has informed us that Mr. Lawrence has, in obedience to these orders, measured off a total area of 2,182 acres out of the Protected forests in 44 villages of that *táluka* for allotment to 637 cultivators. The sole object of these allotments being to provide an additional supply of *ráb* materials, it is intended, we understand, that no cultivation shall be allowed in these areas and that restrictions shall be imposed which will prevent the tree-growth being destroyed or diverted to other purposes than that of supplying *ráb* for ash manure. It does not appear to have been definitely decided whether these lands are to be constituted special Protected forests, or to be disforested and given out on the ordinary survey tenure, subject to special conditions precluding cultivation or the destruction of tree-growth therein, or to be treated as communal waste lands under the charge of the Collector, leaving occupants to arrange *inter se* as to the particular boundaries within which each individual is to exercise a *ráb* user. We understand also that no steps have yet been taken to allot the lands marked off by Mr. Lawrence to the individuals for whose benefit they are intended. We are strongly of opinion, however, that it will be advisable, if possible, to postpone the question of these allotments for the present. We do not question the fact that the allotments of *shindád* land in the Karjat *táluka* have been insufficient for the wants of the cultivators generally. But our inquiry shows clearly that the circumstances of the Karjat *táluka* are not exceptional in this respect. The peculiar features of the original survey settlement of the Karjat *táluka* in the years 1854 to 1856 as regards the user of the *varkas* lands were such as to create doubts as to how far the subsequent *varkas* allotments made in 1874-75 can be considered a complete and satisfactory commutation in all the villages of the *táluka* of the rights of occupants over waste lands. The insufficiency of the *varkas* allotments in Karjat has, from this cause, attracted special attention. It will however greatly complicate the final settlement of the *ráb* question throughout the district, if partial and experimental attempts are made to remedy the wrong complained of in one tract only. The principles under which any proved deficiency in the *ráb* supply in private holdings should be made good should be the same throughout all the *tálukás* in the North Konkan. This question can, we think, be decided much more satisfactorily some years hence, after further experience has shown to what extent the private *shindád* lands, and the waste lands excluded from forests are able to meet the *ráb* demand, than it can be at the present time. It is for this reason that we have recommended that the existing demarcation of the settled *tálukás* should not be disturbed until more reliable *data* are forthcoming as to the actual demand and supply of *ráb* materials in the forest villages. The cultivators of the Karjat *táluka* will have no just cause of complaint, if they are allowed, as we propose, to lop certain trees for *ráb* for the next ten years in the unclosed compartments of the forest.

Reasons for postponing the question of the Karjat allotments.

67. The transfer of rice lands without the *shindád* lands to which by the custom of the country they are ordinarily attached, is a question which has an intimate connection with the *ráb* supply. The inseparability of rice from *shindád* lands was a special feature of the *khásbandi* tenure formerly prevailing in the wilder parts of the Konkan districts. The result, however, of the introduction of the Survey Settlement in these tracts has been to convert the *varkas* lands into separate occupancies transferable at the will of the occupant with or without the rice lands to which they were formerly attached. The evidence shows that rice lands in the Karjat *táluka* have in several instances been disposed of by occupants, who have at the same time retained the *varkas* lands which presumably supplied the *ráb* material necessary for the cultivation of the rice land so parted with. Such separations of rice and *shindád* lands have no doubt been encouraged to some extent by the special conditions of the Karjat settlement, under which the assessment on the *varkas* lands is included in the rates imposed on the rice lands. If *shindád* lands are thus diverted from their legitimate uses and cleared for cultivation, the general *ráb* supply must be diminished, and the demand on the forests to make good the deficit proportionally increased.

Transfer of rice lands without the *shindád* lands to which they are customarily attached.

68. The general question on this subject addressed to the official witnesses (*vide* Volume II, p. 335) will show that we have considered the expediency

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Opinions as to the necessity of restricting such transfers.

of restricting such transfer, of rice lands without their accompanying areas of *shindád*. The Thána Association considers it "both advisable and necessary to prohibit by legislation the separate sale of *kharif* and *varkas* lands, except with the previous permission of a competent officer." Several of the official witnesses also consider that such a restriction would be beneficial and in accordance with local ideas, but rightly point out that it cannot be imposed without recourse to legislation. We doubt whether any regulations on the subject could be devised which would not be liable to evasion. Moreover, any restriction which might now be imposed with this end in view would tend to perpetuate present inequalities in the distribution of *shindád* lands. We cannot therefore recommend any attempts being made to interfere with the full liberty occupants now enjoy of free transfer of all lands in their holdings. As Mr. Atkins remarks "if Government will determine finally and positively the limit beyond which *ráb* privilege in the forests shall not be conceded, and people will get to understand and really believe that a limited area of land is to yield all the *ráb* materials that can be used, they will soon learn to distribute that land amongst themselves in the way most convenient to themselves."

Conclusion of the Commission that no such restriction is practicable.

Extension of cultivation as bearing on the question of *ráb* supply.

69. The conversion of level portions of *varkas* lands into rice fields, which has been gradually going on since the introduction of the Survey into the Konkan, is also a factor in the *ráb* question which cannot be overlooked. By this process not only is the demand for *ráb* increased, but the supply is at the same time diminished. The extent of this increase in rice cultivation cannot be accurately ascertained until the operations of the revision survey are completed. But it is well known that a large area of *varkas* has been so converted into rice land. Such a result may be a matter for congratulation from a purely agricultural point of view, but it no doubt seriously increases the difficulties of forest conservancy. In his reply to one of our circular questions on the subject of the management of lands in which communal privileges are enjoyed, Mr. Fletcher (*vide* Volume III, pages 6 and 7) has expressed a strong opinion that restriction of cultivation is the only remedy for the denudation of forests now in progress.

Consideration of the expediency of checking directly or indirectly further extension of cultivation.

70. As we consider this matter to be of considerable importance we have specially asked the official witnesses whether they consider the present circumstances of the Konkan districts make it expedient that further extension of rice cultivation should be directly or indirectly stopped (*vide* Volume II, pages 334 and 335). The question was put with reference to rice cultivation only, but it is evident that whatever objections there may be to the increase of rice cultivation would apply with equal or even greater force to the clearing of tree-clad *shindád* lands for *varkas* cultivation. We have duly considered the various answers to the question. We have given above, in paragraph 65 a short account of the measures we shall later on propose to be taken with a view to encourage the preservation of the tree-growth in occupied lands. A great deal will be gained if the *shindád* portions of the allotted *varkas* lands are permanently set aside for *ráb* purposes and if the occupants can be induced to agree, either as a condition precedent of the transfer to them of royalty trees, or voluntarily on remission of assessment, not to cultivate these areas. By these means the extension of cultivation in lands which ought to be reserved for *ráb* purposes will, we trust, be reduced to a minimum. Beyond this we do not consider it practicable or desirable to place any check directly or indirectly on the increase of cultivation. In estimating, however, the *boná fide ráb* demand of any village and determining what privileges in the forests are required to meet deficiencies in the supply available from other sources, present requirements only should, we think, be taken into consideration. The extension of rice cultivation will thus, as Messrs. Mackenzie and Loch both point out, receive an indirect natural check, when cultivators find that the *ráb* supply cannot be indefinitely increased, and that it no longer pays to cultivate fresh rice land.

Plots of *varkas* lands used for rice seed-beds in Shahápur not included in the *varkas* allotments.

71. In order to prevent the young rice seedlings being destroyed by immersion, the nurseries are prepared either in elevated portions of the rice fields, or on the *varkas* lands lying outside the embankments. The *varkas* lands so utilised have, as a rule, been included under the name of *pot varkas* in the rice holdings. But in Shahápur, as appears from the *mámlatdár's* evidence (*vide* Volume II, page 36) portions of *varkas* land used for rice nurseries have in many instances been included in the unallotted waste areas, which have been provisionally notified as

Protected forests. The occupants of the rice lands have naturally continued to use the same plots for their seed-beds as before. This user has been, according to rule, considered as unauthorised cultivation and has rendered the occupants liable to pay the usual penalty in such cases in addition to the assessment. In 1884-85 the Commissioner, N. D., (*vide* Exhibit No. 22, Volume II, page 137) gave orders that the assessment only, without penalty, should be levied until the revision survey. Whatever grievance there may be as regards these lands will be removed, if they are measured off and entered in the names of the holders at the revision survey. If the waste numbers in which they are now included are retained as forests, when the demarcation is finally effected, it will be necessary to disforest the portions of them so occupied.

The omission should be rectified at the revision survey.

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ARRANGEMENTS FOR LOCAL SUPPLY.

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MINOR FOREST PRODUCE.

Privileges of collecting minor forest produce under existing regulations.

The privileges of collecting minor forest produce, as granted from time to time by the Resolutions on the Thána Forest Settlement reports are described in the Collector's circular of 30th October 1885. A list is first given of certain products which are strictly reserved by Government in all forests. These are (1) *hirda* and *beheda* nuts (Terminalia chebula and bellerica), the myrobalans of commerce; (2) the pods of the *shikekái* tree (Acacia concinna), used for washing purposes; (3) the flowers, *not* the fruit, of the *mowra* tree (Bassia latifolia) used chiefly for manufacture of spirits; (4) the leaves of the *ápta* (Bauhinia racemosa) and *tembhurni* (Diospyros melanoxylon) trees, used for wrappers for cigarettes. With the above exceptions all other wild fruits and minor produce may be collected free both in Reserved and Protected forests, and ordinarily in closed as well as unclosed portions of forest blocks. But this privilege is limited to the inhabitants of the villages in which the forests are situated.

Collection of *palas* leaves.

2. The leaves of the *palas* tree (Butea frondosa), used for plates and other purposes were also reserved in the earlier settlements, but the restriction was removed in 1885, and the inhabitants of forest villages are now allowed to collect *palas* leaves for their own use but not for sale, and members of wild tribes for use and sale also in Protected and open Reserved forests. In removing this restriction Government remarked (*vide* Government Resolution No. 3890 of 14th May 1885, paragraph 15,) "this will of course not prevent the Forest officers from making arrangements for the departmental collection and sale of *palas* leaves, but will merely save the villagers from some inconvenience and give to the wild tribes additional legitimate means of earning a livelihood."

Collection of teak leaves.

3. Special provisions have also been made from time to time regarding the collection of teak leaves required by the local population for thatching and corn-bins. Under the present regulations inhabitants of forest villages may "take free of charge for their own use leaves from teak trees growing in Protected forests and in occupied numbers, and from the trees felled within the area of Reserved forests that may be set apart for felling operations each year" (*vide* Government Resolution No. 4719 of 10th June 1885, paragraph 5). But the concession is liable to be withdrawn if it be found at any time, that on pretence of merely plucking the leaves, the branches are lopped and injury is caused to the trees.

Collection of *kárvi* and thorns.

4. Similarly the removal of *kárvi* (Strobilanthus grahamianus) and thorns for wattles, fencing, &c., has been made the subject of special rules. In their Resolution on the Forest Settlement report of Bhivandi (Government Resolution No 5251 of the 1st July 1884) Government in order to check indiscriminate cutting of these materials ordered that their removal from both Reserved and Protected forests should only be permitted on obtaining passes from the local Forest officers. These passes for which no fee was thought necessary were directed to be granted "liberally and without undue delay when application is made for them, and no serious objection exists." A year later (Government Resolution No. 4719 of 10th June 1885, paragraph 6), these orders were relaxed to the extent that *kárvi* and thorns might be removed from Protected forests without a pass by forest villagers; the restriction of removal of both kinds of material from Reserved forests being retained. Shortly afterwards (Government Resolution No. 5919 of 22nd July 1885) a further concession was made to the effect that *kárvi* might be removed free and without a pass from the unclosed portions of the Reserved forest by forest villagers. In maintaining the restrictions previously imposed as regards removal of thorns from unclosed Reserved forests without passes, Government observed "it is not the desire of Government or the Forest Department to make any revenue out of thorns, but as is pointed out by the Forest officers the total destruction of thorns would be very injurious to the forests and militate against the growth of young trees. It is necessary therefore to place some restriction on the cutting and removal of thorns, and this can best be effected by allowing them only to be taken on passes, which should be freely

and without delay granted to applicants in such areas and to such extents as may seem advisable to the Divisional Forest Officers."

Earth and stones.

5 Under existing regulations inhabitants of forest villages may also take earth and stones free of charge for purely agricultural purposes from Protected forests, and with the previous permission of the round guard in charge, from the unclosed portions of Reserved forests.

6. The chief points to note as regards all privileges for removal of minor forest produce are, (1) that the privileges are conceded *only* to the inhabitants of villages which have contributed lands to forests, and (2) that they are ordinarily limited to the collection of produce required for *bonâ fide* domestic use. The object of such restrictions as are imposed is either for revenue purposes, as in the case of myrobalans, &c., or for protection of forest growth, as in the case of thorns.

Revenue in Thána from farms of minor forest produce.

7. The revenue from the reserved products in Thána appears from the returns furnished to us by the Forest Department to have been fluctuating and uncertain during the past five years or so. Myrobalans were sold for the first time in 1883-84 in the Southern Division of Thána and realized only Rs. 646. In the following year the farm for the whole district brought in Rs. 7,296. *A'pta* and *tembhurni* leaves have yielded for the last three years an average sum of Rs. 4,535, but some slight deduction has to be made from this average, because in 1882-83 the right of collecting a few other products such as *shembi* bark (Cœsalpinia sepiaria) used for tanning, *palas* leaves, wax and honey was included in the *ápta-tembhurni* farm. *Shikekái* pods although strictly reserved do not appear to have been hitherto sold either separately or in combination with other produce. *Mowra* flowers have been farmed, we understand, from the current year, but we have no information as to the revenue realised. In 1884-85 the departmental collection of *mowra* resulted, we are informed, in serious loss to Government, partly on account of the very high rates paid for collection, and partly because the commercial value of the flowers fell, owing to the restriction placed on their import into France, whence the demand had previously been considerable. Other less important products not strictly reserved have also from time to time been sold according to opportunity and demand. *Shembi* bark, sold separately, realized Rs. 740 in 1881-82, Rs. 240 in 1882-83, and Rs. 317 in 1883-84 in the Northern Division alone, while in both divisions together the farm realised Rs. 861 in 1884-85. Teak leaves were sold in South Thána for Rs. 225 in 1884-85. *Palas* leaves sold for Rs. 505 in 1881-82 in the Váda range only and for Rs. 90 only in 1885-86, while in the Southern Division they were sold in 1883-84 in conjunction with *shembi* bark for Rs. 211-8-0. Wild plantain leaves realised Rs. 46 in 1880-81, Rs. 24 in 1881-82, Rs. 31 in 1882-83 and Rs. 16 in 1883-84. Brab leaves were sold for Rs. 100 in the Northern Division in 1881-82. *Báháva* pods (Cassia fistula) used for medicinal purposes, and gum were sold in the same year in the same division for Rs. 58 and Rs. 56 respectively.

Complaints and claims of local residents.

8. The Memorialists claim for the local residents the right of bringing from Government forests for home consumption such forest produce as leaves, bark, medicinal herbs and roots, fruits and berries, and for the wild tribes the further privilege of collecting for sale the same, and other products such as wax, honey and gum. They also deprecate the present system of farming the right to collect *ápta, palas, tembhurni* and other leaves, and ask that the prohibition now existing against the taking of any such leaves may be removed.

Different interests affected by regulations for collecting and disposal of minor forest produce.

9. In regulating the collection and disposal of all marketable minor forest produce it must be borne in mind (1) that inconvenience may be caused to the residents of forest villages by the strict reservation in forests of any products required for daily or occasional home consumption, if the demand for such products cannot be fully met from their occupied lands; (2) that the wild tribes are to a great extent dependent for their livelihood on the money they earn by collection of minor forest produce of all kinds; and (3) that the residents of villages in which there are no forests depend on the labour of the wild tribes for the supply of many minor products which are not obtainable outside forest areas in sufficient quantities to meet their wants.

Recommendation as to privileges to be conceded to forest villagers.

10. Inhabitants of forest villages will have no good grounds of complaint, if the list of strictly reserved products is limited to articles for which there is a considerable export demand, and for which the local demand, if any, can be fully satisfied from other than forest lands. If they are allowed to collect free of charge all unreserved minor produce such as fruits, leaves, bark, herbs and roots

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No produce should be farmed or collected departmentally unless there is a considerable export demand for it.

for medicinal and religious purposes, no inconvenience need be caused to them by the disposal on behalf of Government by farm or otherwise of the surplus produce of any such articles for which the external trade demand may be sufficiently important to make such a course desirable. It is impossible to foresee what markets may open in future for particular kinds of produce, as the economic uses of different products are better known and tested, and as the resources of the forests are more fully developed. It would clearly be a needless sacrifice for Government to grant to the local population or any section of it, any thing like a permanent monopoly of all minor forest produce which it may not at present be proper or practicable to reserve strictly or make a source of revenue.

Only myrobalans and *mowra* flowers should be strictly reserved at present.

11. Applying these principles to present circumstances, we would recommend that the list of strictly reserved products should contain only the two myrobalans—*hirda* and *beheda*—and *mowra* flowers. *A'pta* and *tembhurni* leaves and *shikekái* pods should not, we think, be strictly reserved; but there is no reason why they should not be farmed or collected departmentally as may be most convenient, so long as the privilege of collecting them free for *bonâ fide* home use by forest villagers is recognized and respected both by farmers and forest subordinates. The strict reservation of such articles, especially leaves, against forest villagers who are permitted to enter the forests for other purposes cannot practically be enforced. It is also unnecessary, even from a revenue point of view; for the local demand of the forest villagers for such products must necessarily be very insignificant in comparison with the external demand, the existence of which would alone, in our opinion, justify their collection by the Forest Department or its agents.

Wild tribes.

12. The wild tribes, as regards their own personal wants, will of course share all the privileges of collection of minor forest produce granted to inhabitants of forest villages. They should, in common with all residents of forest villages, be allowed to collect for personal consumption, sale or barter, all unreserved minor products, the export demand for which may not at the time being be sufficiently brisk to justify their being farmed or collected departmentally. As Mr. Atkins justly remarks in his answer to our circular question No. 14 regarding the special privileges to be allowed to this class of the population (Vol. III., page 52) "the amount of revenue obtained by taxing minor forest produce used in the district will always be infinitesimally small in comparison with the cost of its collection and with the amount of hardship and bother occasioned by that collection being left (as it must be) entirely in the hands of the inferior officials known as round guards." But whenever any such products are so farmed or collected the privilege of selling them by retail must necessarily be withdrawn. The wild tribes will not suffer by this. They will on the contrary gain owing to the collections being made on a larger scale to supply the increased demand for export, which the departmental collection or farming of the product presupposes. They earn more or less according to the demand for any particular product, and there is little fear but that their labour will be remunerated at its proper market value, whether they sell what they collect to local residents, or are paid by the Forest Department at so much for a given quantity delivered. It is possible that they earn more in proportion to their actual labour by retail sale to villagers than under the rates paid them by the Forest Department or contractors. The evidence on this point is not clear. The rates paid for collection of different products by the Forest Department may in some cases be more and in some cases less than what a private individual would pay for the same quantity delivered at the same place. But on the whole we are inclined to think that there can be little difference. The wild tribes owing to their local knowledge of the jungles and the localities where different products are to be obtained, now have, and probably always will have, a practical monopoly of the right of collection. Without their co-operation collection of forest produce on a large scale would be difficult if not impossible. This fact will, we believe, always ensure fair rates being paid to them whether they sell to private customers or to the Forest Department.

Departmental collection of minor forest produce should be the rule, farming the exception.

13. We think, however, that in the interests of the wild tribes, if for no other reasons, departmental collection of all minor produce which it is considered desirable to make a source of revenue to Government should be the rule, and the farming of the right to collect to contractors the exception. There will be

less risk if this course is followed, of the wild tribes being paid less than the value of their labour. The only instance of underpayment by the Forest Department for collection of minor produce which has come to the notice of the Commission is the case of the *dhávda* leaves collected in the South Thána Division for the first time during the past season. The rates fixed appear in this case to have been unduly low, but the collection was admittedly an experiment, and it was probably difficult without experience to estimate the amount of labour required to collect a given quantity of this produce.

Interests of non-forest villagers.

14. The class whose interests may in some cases be affected by the farming of any unreserved minor product to meet trade demands are the residents of non-forest villages, who may have depended for their supply of such products on purchases made from the wild tribes. The withdrawal of the privilege of retail sale of any article from the latter may thus cause some inconvenience and extra expense to their former retail customers. But if, as we have recommended, the farming or departmental collection of minor produce is limited to a few articles for which there is a considerable export demand, the inconvenience to non-forest villagers will be reduced to a minimum. The farming of the *ápta* and *tembhurni* leaves for instance could give no legitimate grievance to residents of non-forest villages, for these trees grow everywhere in the Thána District in *varkas* lands in sufficient abundance to meet local wants.

Collection of *kárvi* how to be regulated.

15. *Kárvi* and thorns are not strictly speaking minor forest produce, but it is convenient to refer to them in this portion of the report, which practically includes all the minor privileges which need be specially considered. The present rule under which forest villagers may remove *kárvi* free of charge from open Reserved forests for domestic and agricultural use, should be retained. The forest villagers including the wild tribes should further be allowed to cut and remove *kárvi* from the same areas for sale to non-forest villagers in the same way as unreserved and unfarmed minor products. We would charge no fees on head-loads of *kárvi* so carried out of the forests for sale elsewhere, but would not allow any cart-loads to be removed except on payment of a permit fee, which should be 4 annas for ordinary cart and 8 annas for a large cart, as already laid down in the list of rates to be charged for forest produce removed under permits from Government forests by villagers for their own *bonâ fide* use or for local industries, appended to the Collector of Thána's Circular of 30th October 1885. To guard against the possible abuse of the free head-load privileges by persons bringing carts to the borders of the forest and there filling them with material brought out free in head-loads, permit fees should be levied on all *kárvi* carried to its destination by carts whether the carts actually go into the forests or are loaded outside. If a man has to send only a short distance for *kárvi* or any similar produce, the expense of carriage will not be more if the material is brought the whole way from the forests to the place where it is wanted by head-loads, than if brought part of the way by head-load and the remainder by cart. On the other hand if the material is required at any considerable distance from the forests, it will be cheaper to pay the permit fees and bring it as far as possible by carts, than to carry it the whole way by head-loads. There is no reason why a garden cultivator in Bassein should not pay moderate fees to Government for the *kárvi* and other forest produce he needs for platforms and standards for betel vines, or why other residents of towns and villages remote from forest blocks should not pay for the *kárvi* they want for wattle and daub huts and sheds, unless the quantity required is so inconsiderable that it can be supplied cheaper by head-loads brought all the way by wild tribes than by cart carriage. But it should be clearly understood and provided for that *kárvi* carried by carts for any part of the distance between the forests where it has been collected and the place to which it is to be taken, is liable to the permit fee just as much as if the cart was actually loaded within the forest boundaries; otherwise there will always be danger of the head-load privilege being abused and the permit fees being evaded.

Collection of thorns and fencing material.

16. The thorns which are the subject of the regulations mentioned above in paragraph 4 include presumably all shrubs and brushwood used for fencing, except the thorny side branches of bamboos (*jhita*) which are now supplied on permits at fixed rates for villagers' own use. Thorns may now be removed by

forest villagers on free passes from Protected and open Reserved forests, but no provision for their removal on payment of permit fees by other than the forest villagers is considered necessary.

17. In paragraph 4 of the Collector's Circular of 30th October 1885 a list is given of thirteen shrubs which, together with all brushwood of no value for any other purpose, may be removed free by forest villagers for ash manure from Protected and unclosed Reserved forests, and, with the permission of the Divisional Forest Officer, from closed reserves also. The 'thorns' which are used for fencing are precisely the materials which by the above-mentioned concession are allowed to be taken for *ráb*. The more thorny shrubs are naturally preferred for fencing, the less thorny for *ráb*: but many thorny shrubs such as the *karand* (Carissa carandas) are in some localities used equally for both purposes.

18. We see no reason to make any distinction as regards removal with or without passes, based on the particular agricultural use to which the material is to be applied. If shrubs and brushwood may be taken free and without passes for *ráb*, the restriction on their removal for fencing without passes cannot practically be enforced. To ascertain whether a cultivator who has cut and removed shrubs from forests without a pass and ostensibly for *ráb*, has burnt the whole of the material on his seed-beds, or has burnt a part only, and utilized the rest for repairing his fences, is impossible without such close *espionage* on his proceedings by forest subordinates as would be an intolerable nuisance to him. It is, no doubt, very desirable in the interests of forest conservancy, that shrubs and brushwood should not be recklessly cut and wasted. But we are strongly of opinion that whatever material is allowed to be taken free and without passes for *ráb* must be given with equal freedom for fencing. The removal of thorns for fencing should therefore be subject to whatever regulations may be laid down for the removal of similar material for *ráb*. As a rule the brushwood used for fencing, other than bamboo loppings, is not of sufficient value to repay carriage from the forests for any distance. There is, therefore, no need either to allow the wild tribes to cut and remove it for sale to non-forest villagers or to provide for its removal by the latter on permits.

19. To check needless waste of such material by forest villagers every inducement and encouragement should be offered to them to substitute live for dead fences. The Bassein people, as personally seen by the Commission and noted by Mr. Ozanne in his account of the garden cultivation of that tract (*vide* Volume IV, pages 114 to 122), rightly prefer live fences, while in other parts where live fences could be grown with equal facility, the cultivators use dead fences only, a practice which entails an unnecessary waste of forest material and additional labour and expense in annual repairs.

Collection of earth and stones.

20. There are no complaints in any of the memorials as regards the existing regulations for the removal of earth and stones from forests which appear sufficiently liberal. It may therefore be presumed that they cause no inconvenience and require no modification.

21. The recommendations made in this chapter apply to the Kolába as well athe Thána District.

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ARRANGEMENTS FOR LOCAL SUPPLY.

SECTION V.

Free Grants of Wood.

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FREE GRANTS OF WOOD.

Arrangements made in 1862-63.

Before making any recommendations on this subject we propose to give a brief summary of the various orders relating thereto. The earliest orders[1] on this subject which need be noted were issued in 1862. In that year Captain Bingham, Acting Conservator of Forests, proposed that the value of timber given gratis for the repairs of temples, *dharmshálás* and works of public utility or any extraordinary grant should, when sanctioned, be debited and credited in the accounts. Government in their Resolution No. 3922 of 28th October 1862 approved of this proposal and ruled that small grants of timber might be made by the Collectors, within a limit to be fixed by the Revenue Commissioner, and that for larger grants the sanction of the latter officer should be obtained. In consequence of these orders the Commissioner, N. D., Mr. Ellis, addressed a circular to the Collectors in his division and laid down the following rules :—

No. 2000 of 17th July 1863.

I.—Timber may be allowed by the Collector gratis for—

1*st.* Repair and construction of—

(*a*) Village *chávdis.*

(*b*) Village Schools.

(*c*) *Dharmshálás.*

(*d*) Public Wells.

(*e*) Bridges over *nálás* and Water-courses.

2*nd.* Repairs to Village Churches, Temples or Mosques.

3*rd.* Houses of agricultural classes paying revenue to Government. Grant to be made only when the Collector considers the circumstances of the applicant to call for the grant.

4*th.* Agricultural implements, wells for irrigation, and other agricultural improvements, to be granted on the same grounds as No. 3.

II.—A grant under Nos. 3 and 4 is not to exceed Rs. 20 in value and a grant in other cases is not to exceed Rs. 50 without previous sanction of the Revenue Commissioner.

III.—The grants are to be made from any collection of timber that may be available, the cost of felling and carriage from the forest to the depôt being recovered from the grantees.

IV.—When no depôt is available, then the applicants will be allowed permits or passes to cut on their own account such trees as may have been marked for cutting, the Forest establishments being responsible that the privilege is not abused, and that other trees than those pointed are not cut.

2. The rules quoted above were approved by Government in their Resolution No. 1106 of 26th March 1864, with an order that the wood thus granted should be cut from the reserved kinds of trees in village reserves, and a remark that "the reservation made in clauses 3 and 4 of Rule I, *viz.*, that the grants should be made only when the Collector considered that the circumstances of the applicant called for the grant, was calculated to prevent an abuse of the privilege, whilst it left in the hands of the Collectors that discretionary power, which it was always so desirable they should have."

Difference between the rules in force in the Northern and Southern Divisions respectively.

3. A similar circular laying down very similar rules was addressed to the Collectors of the Southern Division by the Revenue Commissioner, S. D. As these rules did not differ materially from those already approved for the Northern Division, Government sanctioned their continuing in force in the Southern Division until experience showed that modifications were required (Government

No. 2238, dated 21st July 1863.

[1] *Vide* summary of orders relating to free grants of wood, accompanying Government Resolution No. 1790 of 24th March 1875, Revenue Department, quoted in the Bombay Forest Administration Report for 1875-76, pages 58 to 66.

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Resolution No. 4012 of 15th October 1864). The Southern Division rules, which form the basis of the rules now in force in Kánara, provided for free grants being given to lowly paid Government servants, as well as persons paying revenue to Government, for the repair and construction of houses injured or destroyed by fire, flood or similar calamity, and also "for the construction of houses which Government servants may be obliged to erect in consequence of their being stationed at newly established revenue or police stations where there is not sufficient house accommodation." No provision for grants for agricultural implements and improvements was made in the Southern Division rules. But on the other hand it was laid down that nothing in the rules should interfere with the Dhárwár rules amended and confirmed by paragraph 2 of Government Resolution No. 3922 of 1862. Rule 2 of the Dhárwár rules provided that bamboos might be cut and dead-wood gathered on permits to be previously obtained from the *mámlatdárs* and *mahálkaris*, and rule 4 allowed the relaxtion of rule 2 "at the discretion of the Collector, in favour of the villages wherever there is jungle," and provided that "cultivators may be allowed to cut brushwood for their agricultural operations and private use, and the poorer classes to cut and convey head-loads of firewood for sale on permission from the Collector of the district."

Policy and rulings of the Government of India in 1871.

4. The attention of the Government of India appears to have been called to the Bombay rules in 1870, and after some correspondence on the subject that Government stated in their letter No. 149 F. of 24th February 1871, "that they were not opposed to occasional grants of wood and timber for charitable purposes and for the construction of religious buildings and buildings of public utility, but that as previously remarked by them such grants were equivalent to a grant from the Imperial revenue, and should, therefore, be carefully watched." The opinion was at the same time expressed that "ordinarily such grants should only be made for special causes, such as old established custom, or the desire to conciliate the people living in the vicinity of the forests, on whose good will the operations of the Forest Department much depended, or other considerations of policy, or where there was no regular timber trade, and where it was difficult to provide needful wood and timber by purchase." In their letter No. 742 of 23rd June 1873 the Government of India further ruled that the Government of Bombay might sanction free grants without reference to the Government of India when the grant was an isolated one or one of a series, the aggregate amount involved in which did not exceed Rs. 500, but that a reference was necessary if the grant exceeded that amount in value. The requirements of these orders were satisfied by Government delegating to the Commissioners authority to sanction grants not exceeding Rs. 500 (Government Resolution No. 4316 of 28th July 1873).

Extent of discretionary powers given to different officers in 1875.

5. In 1875, on the recommendation of the Revenue Commissioners, *mámlatdárs* were given discretionary power to make free grants of wood strictly under the rules in force up to Rs. 20 in value; Collectors and their Assistants up to Rs. 50; and Commissioners up to Rs. 500. The Conservators of Forests were at the same time empowered to make free grants of wood up to Rs. 50 as special rewards to those who might assist the Forest Department in the preservation of forests or the prevention and detection of forest crimes.

Extension of free grants for houses to indigent sub-tenants and relatives of persons directly holding land under Government.

6. In their Resolution No. 5612 of the 4th October 1875, Government approved of a recommendation by the Commissioner, N. D., based on a suggestion made by the Collector of Thána, that the orders in force should be so far extended as to authorise free grants of wood being made for the construction of houses to rayats who have no buildings of their own, but are merely sub-tenants or relatives of those who directly hold land under Government, with the reservation that the concession should extend only to the indigent wild tribes.

Re-consideration of former orders in 1880. Except in certain districts no grants to be made in future except with the previous sanction of Government.

7. No changes of any importance were made in the rules until 1880, when the whole question was re-considered and Government decided (*vide* Government Resolution No. 5977 of 12th November 1880) that "subject to any rules which may be hereafter passed under the Indian Forest Act, no grant of free wood is allowed under any circumstances for any purpose without the previously obtained sanction of Government. Certain special provisions, however, for grants of wood in the Mándvi *táluka* of Surat, in the Panch Maháls, in the Belgaum and Bidi

tálukás of Belgaum, and certain *tálukás* of Násik, Khándesh, Ahmednagar, Poona and Satára districts as detailed in the Resolution, were declared to be unaffected by the above ruling, and as an exceptional case the Kánara permit rules sanctioned in 1872 were allowed to remain in force.

8. These orders have remained unchanged up to the present time, except that Conservators of Forests are now allowed to give free grants up to Rs. 20, and Divisional Forest Officers up to Rs. 5 as payment for service to any member of a wild tribe who may have merited such a grant by assistance rendered by him to the Forest Department (*vide* Government Resolution No. 7658, dated 26th September 1884). This provision, however, relates entirely to grants made for *services rendered* and need not be affected by any recommendations we shall hereafter propose, which will apply solely to *free* grants made for the convenience of the poorer classses, and to secure the sympathies and co-operation of the population generally in matters of forest conservancy.

Value of free grants made in Thána and Kolába from 1868 to 1885.

9. The value of the free grants made in the Thána and Kolába districts in each year from 1868-69 to 1884-85 is shown in the table subjoined :—

Year.	Value of free grants.								
	Thána.			Kolába.		
	Rs.	a.	p.	Rs.	a.	p.
1868-69	2,434	13	3	3,383	2	9
1869-70	1,985	0	0	2,769	2	4
1870-71	1,375	2	10	5,655	1	0
1871-72	1,539	1	4	1,624	7	0
1872-73	1,775	14	6	3,089	0	0
1873-74	1,788	1	2	2,508	4	0
1874-75	662	8	0	1,504	6	0
1875-76	1,454	4	0	1,143	6	0
1876-77	5,064	4	4	2,337	4	0
1877-78	5,946	9	6	1,033	2	0
1878-79	3,492	0	0	55	0	0
1879-80	3,422	10	6	415	0	0
1880-81	1,064	9	0	553	12	0
1881-82	178	1	0	778	8	0
1882-83	.....			298	12	8
1883-84	193	9	6	361	0	0
1884-85	1,765	2	0	1,709	8	0
Total ...	34,141	10	11	29,218	11	9

The fluctuations up to 1880-81 call for no special remarks. The decrease in the value of the grants in the three following years, which is specially noticeable in Thána is no doubt the direct result of the orders of November 1880, quoted above in paragraph 7. In the Forest Administration Report for 1882-83, the absence of all grants in Thána in that year is attributed "to the fact that the poorer people have resorted to the agricultural depôts to self-provide their requirements in wood." This explanation however is not altogether in accordance with the evidence before us, which rather leads us to suppose that the *poorer* classes, instead of resorting to the agricultural depôts managed somehow, notwithstanding all orders to the contrary, to 'self provide' themselves according to former custom from the nearest jungles.

Popular complaints and representations.

10. The question of giving free grants of wood for special purposes and under special rules is not prominently alluded to in any of the memorials we have received. Such grants would indeed be superfluous if the claims of the Memorialists were admitted in their entirety. But in clause 9 of paragraph 28 of the Memorial to the Viceroy it is nevertheless asked that *mámlatdárs* "should be empowered to give permission to cut wood gratis, other than teak and blackwood, to the extent of Rs. 50, and the village officers to the extent of Rs. 20 for the purposes of building and repairing houses; but should not grant such

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permission to the same person more than once in three years except under special circumstances." In clause (5) also of the same paragraph it is asked "that passes and previous permission should only be required in the case of timber (from forests) required for house building and repairs, or for the building and repairs of temples and public buildings such as *dharmshálás, seráis, masjids.*" In the separate memorial received from Mr. Karandikar and three others, a similar request is made. Several witnesses have also complained of the delay and uncertainty in obtaining free grants under existing rules to replace houses destroyed by fire or other calamity.

Opinion of official witnesses.

11. The policy of making free grants of wood and the manner in which such grants should be regulated are fully discussed in the answers to the questions on the subject circulated by the Commission (*vide* Volume III, pages 107 to 110). With very few exceptions all the officers consulted agree in recommending that the discretionary power formerly exercised by local authorities should be restored. But while some consider that authority to make free grants should be vested in Revenue and Forest officers concurrently, others think that the authority should be exercised exclusively by the latter. Others again while advising the restoration of powers in this respect to Revenue officers express no opinion as to the expediency of investing Forest officers with similar powers, the Thána Association alone expressing a decided opinion that the Forest Department should have nothing to do with the matter.

12. As far as the Thána district is concerned, the necessity for special free grants will be considerably lessened (1) by the arrangements we have proposed in Section II. of this chapter of our report, for the supply of timber, &c., on favourable terms to local residents, (2) by the conditional sale of the royalty trees throughout the district as proposed in Chapter VI., whereby, subject to a provision expressly precluding export, large supplies of useful timber will be made available for local consumption. But these arrangements will not, we consider, be complete, unless due provision is also made for free grants of timber to be given in exceptional cases.

Drawbacks of existing system in Thána and elsewhere.

13. The present system obtaining in Thána and elsewhere, under which all such grants require the previous sanction of Government is, we think, open to great objection on account of the delay and uncertainty necessarily caused by it. The value of free grants to villagers whose houses have been destroyed by fire and who have no private supplies of wood and no means to purchase, is much enhanced by prompt action, and there is also better guarantee that timber thus given will, if given quickly, be applied *bonâ fide* to the purposes for which it is wanted. In such cases the saying *bis dat qui cito dat* has a real significance.

Recommendations.

14. We recommend, therefore, that the discretionary powers enjoyed both by Revenue and Forest officers under the rules obtaining before November 1880 should be restored both in the Thána and Kolába districts. A fair annual limit should be fixed within which each officer so empowered should be authorized to make grants, any deserving applications received in excess of such limit being reported for the orders of Government.

Objects for which free grants should be given, when necessary.

The objects for which free grants may be given if necessary should be defined as in Rule XIV of the present Kánara permit rules with a few necessary modifications and additions as under.

1*st.* Works of public utility, *e.g.*—

(1) Village *chávdis* or offices; (2) village schools; (3) *dharmshálás* or rest-houses, (4) covers; fences, &c., of public wells; (5) bridges over *nálás* or water courses, (6) works of *bonâ fide* public utility not particularised above, constructed wholly or partly with the aid of popular contributions or local funds.

2*nd.* Repairs of village churches, temples, *maths* or mosques, &c., and grants for religious edifices not the property of individuals, but public as regards whole sections of the community.

3*rd.* Reconstructions of houses injured or destroyed by fire, flood, or similar calamity, if the houses so injured or destroyed belong to persons paying revenue to Government, or their tenants, or lowly paid Government servants.

4th. Cases of distress or poverty not coming under the above heads.

5th. For all agricultural purposes, when occupants have neither private supplies of suitable wood, or means to purchase.

Provision for free grants of wood for agricultural implements is not made in the Kánara rules, as under the system in force there, such wood is otherwise obtainable without payment, but we consider the provision necessary in the case of Thána and Kolába.

15. The objects above enumerated cover a wide range, and include, we believe, all cases in which free grants ought ever to be made. Judicious liberality in this respect is one of the chief means by which the passive acquiescence, if not the active good will and co-operation of the people in forest conservancy can be secured. Those of us who have had experience of the working of the free grant system in Kánara know how valuable an aid it is in reconciling local residents of a forest district to regulations and restrictions, which, however necessary in themselves, could otherwise hardly be expected to command their sympathy. The inhabitants of Thána with its more limited forest reserves and its larger population cannot reasonably expect that free grants should be distributed to them with such an open hand as in Kánara, where exceptional conditions make such treatment both possible and politic. But annual grants very much in excess of the average value of those made in Thána and Kolába during the past five years could nevertheless be made in those districts with advantage to all concerned, and without exceeding reasonable limits. It should be clearly understood, however, that such free grants are not intended to *supersede* but only to *supplement* the normal arrangements for local supply, in exceptional and deserving cases of proved necessity or public convenience.

Limit of discretionary power proposed to be given to different authorities

16. As regards the limit of value of such grants, we think the Commissioners should, as formerly, have power to make grants up to Rs. 500 in any one case, and Collectors and Conservators of Forests up to Rs. 50. The latter officers should be also empowered to delegate their authority within such limits as they may consider advisable to the Assistant and Deputy Collectors in charge of *tálukás*, and Divisional Forest Officers respectively. Collectors might also with advantage permit experienced *mámlatdárs* to make grants of wood not exceeding Rs. 5 in value to indigent cultivators for agricultural implements. Such delegation of powers will not of course relieve the superior officers from the responsibility of seeing that free grants are not made improperly.

Details of system recommended.

17. In order that these grants should be made under a uniform and business-like system, we would recommend that all officers who are invested with discretionary power in this behalf should be furnished with printed cheque books. On an application for a free grant being acceded to, the authority granting it should furnish the applicant with a cheque showing the name and residence of the applicant, the value and description in general terms of the wood granted, and the purpose to which it is to be exclusively applied, retaining of course the counterfoil in his own office. This cheque which should be made non-transferable and negotiable only within a specified time, should be accepted as currency at any auction sale of timber conducted by the Forest Department, or at any *coupe* depôt at which wood is stacked for retail sale at fixed rates, to the extent of its enfaced value, if presented by the payee or his duly authorized agent within the time specified. The holder of the cheque will thus have the option of obtaining whatever materials he may require at the ordinary rates for local supply from the annual *coupes* without payment, up to the amount of the cheque, or of purchasing any material that suits him at the periodical petty auctions for local supply, tendering the cheque as payment or part payment as the case may be. The Forest Department will thus have a ready means of ascertaining the value of all free grants that are made, bringing them to proper account, and taking credit for the material so supplied.

18. It should be generally made known that all ordinary applications for free grants should be made early in the season, say not later than the end of October in each year, so as to ensure, in the event of their being acceded to, that the wood required shall be available from the ordinary annual fellings for local supply. In cases of urgency, however, duly certified as such by the Collect-

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or, should the stock available from the annual fellings be exhausted, the Forest Department should be required to make special arrangements to meet the demand by felling the necessary trees, or pointing out the trees which may be felled, within a reasonable distance of the locality where the timber is required. This provision may be necessary to meet the case of grantees whose houses have been destroyed by fire late in the season, and who urgently require wood to reconstruct them before the rainy season sets in.

19. As a check on the possible misapplication of wood obtained by free grant by sale or otherwise, we think it should be made a rule that all correspondence on applications of this nature should be kept open by the *táluka* authorities until the wood has been actually applied to the purposes intended, and not returned to the officer making the grant for final record until a certificate to that effect is attached to it.

CHAPTER V.

WILD TRIBES.

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WILD TRIBES.

Our attention has been specially called by Government to the situation of the wild tribes of the Konkan districts. Much has already been said about them in different parts of the preceding chapter dealing with the local supply of forest produce. In this chapter we shall record all the special information we have been able to collect regarding their numbers and condition, and discuss their claims to be treated with special indulgence as regards forest privileges, as a class distinct from the ordinary cultivators and labourers of the district.

Definition of the term 'wild tribe'.

2. The term 'wild tribe' as now used in the Konkan districts is applied to a great number of persons of different aboriginal races, who lead an unsettled life, and who subsist for the greater part of the year on the wages they earn as carriers and distributers of forest produce amongst the local residents. A more exact definition of the term is impossible. There are no available statistics to show the total number of persons who earn their living in this way. The census returns give the total population of each aboriginal tribe, but do not distinguish those who lead a settled life, as cultivators and agricultural labourers, from those who depend solely on the forests for their subsistence. This omission might perhaps be supplied with advantage in future census operations. Mr. Atkins in reply to our question asking for information on this point has stated (*vide* Volume II., page 258):—

"It would take a long time to collect even approximately accurate statistics. I may remark, however, that the whole population in many parts of the district, *e.g.*, Mokháda, much of Dahánu and Váda and many villages in the Shahápur and Murbád consists of wild tribesmen. These in their villages and hamlets are dependent on the forests to exactly the same extent as and no greater an extent than Kulambis, &c., are in their villages. It is only in the neighbourhood of railway stations and bázár towns, where there is a demand for forest produce on the part of traders for trade purposes or of Pándharpeshás for their own consumption, that the wild tribes, as distinct from ordinary cultivators, occupy themselves as hawkers."

Strength of the aboriginal element in the Thána population.

3. The local or early element in the Thána population is known to be exceptionally strong. But thousands of families of cultivators and labourers of aboriginal descent have long since abandoned a nomadic life, and cannot now be distinguished, except as regards their origin, from the ordinary settled population of the district. For instance a very large proportion of the Kokanis, Várlis, Rámoshis, Bhils, Vadárs, &c., are either cultivators or agricultural labourers and can no more be correctly called wild tribes than the Kunbis. On the other hand there are a few tribes who are still, as a rule, unsettled, and eke out a precarious living by sporadic hill cultivation, by collecting forest produce for barter or sale at the nearest markets, and also to a certain extent by killing and eating various sorts of wild animals. They live in miserable hovels in or near the forests. The Kátkaris especially are of this class.

Census returns and rough estimate of unsettled population of Thána.

4. The Thána Memorialists in their printed petition to the Viceroy give the forest population of Thána as 237,680 souls, while Mr. Campbell in his Gazetteer (Volume XIII., Part I., page 153) gives the total strength of the early tribes as 253,562. The Memorialists evidently include most of the early races in the category of *wild* tribes, but as stated above a very large proportion of those classes are wild tribes in name only and not in habits. We can make a rough guess as to what proportion of the aboriginal tribes is still unsettled, as shown in the following table. But without a special census no very reliable figures can be given:—

No.	Name of early Tribe.	Population according to the Census of 1872, including Panvel.	Of which still unsettled
1	Bhils ...	26	.....
2	Dhodiás	2,890	.....
3	Dublás	8,595	.....
4	Kátkaris	34,029	30,000
5	Kolis ...	72,612	.....
6	Kokanis	4,584	.....
7	Phásopárdhis	106	.....
8	Ráikaris	65	.....
9	Rámoshis	13	.....
10	Thákurs	55,674	30,000
11	Vadárs	341	.....
12	Vághris	16	.....
13	Vaitis...	4,596	.....
14	Várlis	70,015	20,000
	Total ...	2,53,562	80,000

5. As far as forest administration is concerned the only aboriginal tribes, whose condition is a matter for special consideration, are the Kátkaris, the Thákurs and the Várlis. We may roughly calculate the wild tribe population of Thána, including Panvel, to be about 80,000 souls. Excepting a section of the Kátkaris called Son Kátkaris, all the members of this tribe are unsettled. The Son Kátkaris, about one-half of the Thákurs, about three-fourths of the Várlis and all the rest of the early tribes are in no way distinct from the ordinary labouring classes.

Character and condition of the aboriginal tribes.

6. The following extracts from the Thána Gazetteer will give a clear idea of the character and condition of the three classes of early tribes who are still more or less attached to the forests, and whose sympathy it is desirable to secure in the interests of forest conservancy. Speaking of the early tribes in general Mr. Campbell writes :—

"There is much difference in the character and condition of these tribes. The sea or Son Kolis and Vaitis are vigorous and prosperous ; the Agris and the hill or Malhár Kolis, though drunken, are steady workers, shrewd, thrifty and fairly prosperous ; the Thákurs are willing workers, orderly and fairly sober, and some of them well-to-do ; the Várlis, Dublás and Dhodiás are idler and less sober than the Thákurs, fewer of them are well-to-do, and a larger number are extremely poor ; and the Kátkaris are the poorest and least hopeful, drunken, given to thieving, and unwilling to work except when forced by hunger.

"At the beginning of British Rule (1818) the hill tribes, among whom Kolis, Bhils, Kátkaris and Rámoshis are mentioned, were 'most degraded'. They gained a scanty living by tilling forest glades and by hunting. But their chief support was plunder ; they lived in small cabins in the heart of the forests, and were not only wretched themselves but kept the villagers in a state of alarm. With the view of improving their condition, the reduction of one-half of their assessment was sanctioned in several of the wild north-east districts. In 1825, according to Bishop Heber, who had his information from Mr. Elphinstone, the charcoal burners of Sálsette, probably Kátkaris, were so wild that they had no direct dealings with the people of the plains. They brought head-loads of charcoal to particular spots whence it was carried away by the villagers who left in its place a customary payment of rice, clothing and iron tools. About ten years later Major Mackintosh (1836) described the Kátkaris as great thieves, stealing corn from fields and farm-yards, committing robberies in the villages at night, and plundering lonely travellers during the day. Their circumstances were often desperate. Such was their craving for drink that if one passed a liquor-shop without either money or grain, he would most likely pawn the only rag on his body and go home naked.

"Under British management the wild tribes were gradually forced to give up their life of plunder, and many of them settled to tillage and labour. Between 1835 and 1840 inquiries connected with the reduction of assessment showed that among the wilder tribes of Murbád, though the Kátkaris were idle vagrants given to liquor and stealing, the Thákurs were a quiet peaceable race living by themselves, many of them well-to-do, some of them breeding cattle and others devoting themselves to upland tillage. Still except in some

villages where they had lived for generations and were well housed, the Thákurs were an unsettled tribe, ready to change their hamlets if a child sickened or a cow or two died. Both tribes are described as wearing scarcely any clothes, eating the coarsest food, savages who loved indolence and dissipation, had no idea of providing for the future, and spent in drink what small sums they made. There was much difference of opinion as to whether it was advisable to lessen their payments. Government held that the concession granted ten years before had failed and that the people's wretchedness was as great as it could have been under any circumstances. Mr. Williamson, the Revenue Commissioner, on the other hand was of opinion that both in Gujarát and Khándesh the free grant of land to the hill tribes had been followed by the best results; he admitted that, in Thána, improvement had so far been slow, but urged further concessions with the object of bringing the hill tribes to settle as husbandmen. Mr. Williamson's views prevailed, and in 1838, to tempt them to settle to steady work, the Kátkaris were given land at specially low rates, and those who grew the best crops were rewarded with presents of goats, cows, bullocks, and tools. The custom which still continues in Karjat, was also introduced of granting Kátkaris small patches of hill land free of rent. At this time (1838) they were described by Dr. Wilson as the most degraded natives he had ever seen. Their dwellings were miserable beyond belief, and though they received considerable sums for their catechu, they were so utterly improvident that they were often forced to feed on the most loathsome food. They were depraved as well as debased, and were particularly given to drunkenness. In 1839 Dr. Mitchell described their women and children as gaunt and half famished, and their dwellings as wretched in the extreme, mere huts little better than the open air.

"The Várlis in the north-west of the district were considerably better off. They were unshaven, and slightly clothed, lived in small bamboo and bramble huts, and seem to have been shunned by other castes. At the same time they grew pulse and gram, reared a number of fowls, earned a little as wood cutters, and though immoderately fond of smoking and drinking were in comfortable circumstances.

"In 1877 inquiries showed that the Kolis and A'gris, though their love for drink kept them poor, were vigorous, well employed, and fairly prosperous, and that the degraded state of the Kátkaris was chiefly due to their unwillingness or unfitness for steady work, their love of pilfering and their passion for drink. Among Várlis and Thákurs a greater number had of late settled to husbandry and labour, and on the coast and along the main lines of traffic many were well-to-do and some were prosperous. Still a considerable number of the wilder section of both these tribes were suffering from the strictness of the forest rules, and, though willing to work, they had much difficulty in finding employment. At the same time it did not seem advisable to introduce any special measure on their behalf. The severest pressure of the forest conservancy was over. And the freer working of the forests, which would be possible after a few years more of systematic conservancy would furnish a larger supply of suitable employment, while the gradual opening of the country by roads would help them to overcome the shyness which had hitherto kept the people of the more secluded settlements from seeking work in the larger towns."

7. He writes further as to the special condition of the three classes above named as follows :—

Kátkaris.

"Kátkaris or makers of *kát*, that is, catechu or Terra japonica, are returned as numbering 34,029 souls and as found over the whole district. Their settlements are chiefly in the centre and east, and they are rarely found along the coast north of Bombay. * * * * * * * According to one account Kátkaris are divided into Sons or Maráthás, and Dhors, and the Maráthás are sub-divided into Helams, Gosávis and Povárs. According to another account there are five Kátkari divisions, Sons, Dhors, Maráthás, Sidhis, and Varaps, probably reverts from Muhammadanism, and eight common Kátkari surnames, Bágle, Povár, Diva, Mukane, Vágh, Jáma, Bhoir and Chavhán. The Son or Marátha Kátkaris do not eat cow's flesh, and are allowed to draw water at the village well and to enter Kunbis' houses. Their head-quarters are in the southern sub-divisions of Karjat and Panvel. The Dhors eat cow's flesh and like the Mháris are held to be impure. They are found chiefly in Murbád, Shaháp ur and Váda.

"As a rule Son Kátkaris are a settled tribe. Many of them, both men and women, have found permanent employment in Bhivandi as rice cleaners, and numbers, both in Bhivandi and Karját, have two or three months' steady work a year as field labourers. Some of them still make *kát* or catechu, the thickend juice of the *khair*, Acacia catechu. But from the increase of forest conservancy the manufacture is nearly confined to private *inám* villages and to forests in Native States. * * * * * * * * A few partly support themselves by tillage. They never take land on a regular lease or grow rice. They till uplands, *varkas* either waste or taken from the Government holders, or on agreements to share the produce. They burn brushwood, *ráb*, on the plot of ground, and use the hoe but never the plough. When their supply of grain is finished, they gather and sell firewood and wild honey, and with their bows and arrows, kill small deer, rabbits, hares, and monkeys. When these fail they dig old thrashing floors for rats, eating the rats and taking their stores of grain, or they steal from fields and thrashing floors. Their

women work hard, acting as labourers and bringing into market the head-loads of wood their husbands have gathered in the forests. They are very poor, generally in rags and often without any wholesome food. As soon as they get together a few pence, they spend it in drink and tobacco.

Thákurs

"Thákurs, or chiefs, returned as numbering nearly 55,000, are settled in large numbers to the east and south-east in Shahápur, Murbád and Karjat; they number about 5,000 in the centre and south-west in Vada, Bhivandi, Kalyán and Panvel; and they occur in small numbers along the coast north of Bombay. They are divided into Ka-Thákurs and Ma-Thákurs.* * *They are truthful, honest, teachable and harmless. They are hard-working, the women doing quite as much work as the men, and they are much more thrifty and more sober than either Várlis or Kátkaris. They neither borrow nor steal, almost never appear either in civil or in criminal courts, and are neat and cleanly in their ways. They are husbandmen, working in the fields during the hot, rainy, and early cold weather months. At other times they find stray jobs, gathering firewood for sale, and wild fruits and roots for their own eating. In the rainy season most of them till upland fields, *varkas*, raising crops of *náchni* and rice. They do not take the land on a regular lease, but occasionally sublet it from the Government tenants, to whom they pay a share of the produce. They keep cattle, and occasionally, but rarely if the land is level, plough. Most of their tillage is by the hand and hoe. They live in or near forests, but always choose a level spot for their hamlet.

"Though many live in hamlets and work as labourers, some Thákur villages, such as Khatgaon in Shahápur, are well built and the people are as well clothed as in a Kunbi village. Some of these Thákur villages are very orderly and clean, the people showing much respect to the headman who belongs to their own caste. Their condition varies more than that of either the Varlis or the Katkaris. Some are very poor, living from hand to mouth like the Dhor Kátkaris; others like many Várlis are fairly off, and though they do not own land are regular tenants; others again are decidedly well-to-do with considerable holdings and a good stock of cattle. They are probably on the whole much less indebted than Várlis and still better off than Kátkaris. In Mr. Cumine's opinion, if all Thákurs had land and had a railway and a road near them, as the Khatgaon Thákurs had, they would rise to the same well-to-do and prosperous state.

"Várlis, probably originally Varális or uplanders, and in old times of sufficient importance to give the name Varlát to the sixth of the seven Konkans, are returned as numbering 70,015 souls. Their head-quarters are in the north-west in Dahánu, where they form more than half of the population. Lately a few have settled in Mokháda, Murbád, Kalyán and Karjat. Darker and slimmer than Thákurs, they are generally fairer and better made than Kátkaris, and differ little from Kunbis in appearance and features. They are very innocent and harmless, but immoderately fond of liquor. They commit crimes of violence only when they are drunk, and they join in thefts and gang robberies only when they are starving. Among themselves they are extremely fond of fun and very sociable. With strangers they are timid at first, but with Europeans whom they know, they are frank and very truthful. They are certainly cleaner than the Kátaris, and probably just as clean as the Thákurs. Their unthrifty habits prevent them having any command of money, but as far as they are able they are extremely kind to one another. Várlis follow no regular craft or calling. None of them are in the army, in the police or in any branch of Government service, except the Forest Department. Their love for the forests is so great that, though there may be plenty of waste land ten or twelve miles from a forest and though they may be very anxious to get land, they cannot be induced to go so far from their woods. The daily life of those who own land and have not pledged it, and of those who till other people's land is much the same as the Kunbis' daily life. Those who have pledged their land, and whose assessment is not paid by a money-lender, are employed during the rains in tillage, and during the fine weather, in gathering and selling grass and firewood to pay their assessment, themselves meanwhile living on wild roots and fruits. A large number hold no land and are the tenants of Bráhmans and other large land-holders. A third class are the servants, often the born servants, of some rich money-lender or Kunbi, to whom they have pledged their labour, or have been pledged by their fathers for twelve or fifteen years in consideration of having their marriage expenses paid. The daily life and occupation of the rest are the same as those of the Kátkaris. They are passionately fond of sport and will take their guns into the forest and stay there for days together, shooting *sámbar*, *bhenkri*, peacocks, and jungle and spur fowls over the forest pools and springs.

"The condition of the Várlis varies considerably in different parts of the district. In Dahánu, except in villages near the railway where they seem fairly off, their condition is bad. The Bassein Várlis have settled as husbandmen, live in fairly comfortable houses, and rear cattle and goats in considerable numbers. They do not own much land, but cultivate on the contract system or as half-sharers, *ardhelis*, or make a living by bringing bundles of dead-wood to market or to the various boat stations on the Tánsa and Thána creeks, and by cutting grass for export to Bombay. They are much better off than the Dahánu and Máhim Várlis. * * * In Dahánu, where they nominally own about one-third of the land, they form villages with their own headmen and caste fellows. In other parts, where they own little land, they generally live in hamlets, or have a few huts in Kunbi villages. In any

case they are always considered pure by the Kunbis, and there is never the slightest objection to their entering their houses or going to the village well. Varlis are occasionally found with considerable property in land and seventy or eighty head of cattle. But most of them are said to be losing their land, and to have grown poorer since their time of prosperity during the American war."

Unsettled population of Kolába.

8. The proportion of unsettled tribes in the Kolába District is comparatively small, except in Panvel *táluka*, the figures for which are included in those given above for the Thána District. Excluding Panvel we find the total number of Kátkaris and Thákurs in Kolába, according to the census returns of 1881, to be 10,292 and 3,629 respectively.

9. In the course of our inquiry we examined several Kátkari, Thákur, Várli and Koli witnesses brought before us by the Forest Associations of Thána and Kolába. Their statements will be found printed in parts I and II of Volume II. These statements contain much interesting information as to their habits and means of subsistence. The special grievances of these tribes are enumerated in the memorial to the Viceroy. They complain chiefly of the prohibition of *dalhi* cultivation, and of restrictions which prevent a free exploitation of the forests for all the produce they formerly collected for personal consumption or sale. As regards the first grievance it is necessary to state that the restrictions on *dalhi* cultivation were imposed long before the passing of the Forest Act. The destructive effects of this mode of cultivation were fully seen at a very early period of British Rule. Persistent efforts have been made during the last half a century to confine this form of cultivation within the narrowest possible limits. In Thána *dalhi* cultivation may be said to have been stopped everywhere. It would be a retrogade and mistaken policy to encourage its revival. The wild tribes themselves do not seriously claim this privilege. Ráma Pándu Thákur, Witness No. 7 of Karjat, formulated his demand in these terms: "we do not ask for leave to *dalhi*, but for more land to cultivate than we do now. Government, *we know*, would not let us *dalhi*." In Kolába, where the forests are thin and of small growth, what is there called *dalhi* cultivation is permitted on a very limited scale. But the term *dalhi* as used in the Kolába district, denotes simply the ordinary hill side cultivation by transplanting seedlings reared in seed-beds prepared by burning *ráb*, whereas true *dalhi* or *kumri* cultivation is carried on by cutting down and burning the jungle on a hill slope and sowing grain in the ashes. The conditions on which, and the extent to which this so-called *dalhi* cultivation is permitted in the Kolába forests will be seen on reference to Appendices C. and D., pages 136 and 137 of Volume III.

Vide Thána Witnesses Nos. 7, 11, 15, 16, 25, 39, 46 and 57; and Kolába Witnesses Nos. 2, 9, 11 and 21.

Special grievances of the Thána wild tribes.

10. A free use of the forests as claimed by the Memorialists on behalf of the wild tribes is, like true *dalhi* cultivation, utterly incompatible with the aims of forest conservancy But there is no reason why sufficient provision for the livelihood of the wild tribes and other depressed classes should not be made under proper regulation and control.

Privileges in Forests enjoyed by wild tribes under existing orders.

The concessions now allowed to the wild tribes in Thána are given in paragraphs 43 to 48 of the Collector's Circular of 30th October 1885 printed in the Volume of Miscellaneous papers. Briefly the privileges are as follows:—

(*A*). All the undermentioned privileges accorded to the inhabitants of forest villages:

(a) Reserved Forests.

Ráb.

(1). They may take free of charge for their own use from the unclosed portions, and with the permission of the Divisional Forest Officer from the closed portions also, grass, reeds and leaves except those of *tembhurni* and *ápta*.

(2). They may also cut for *ráb* certain specified shrubs—13 in number—and generally all brushwood of no value for any other purpose, but may lop no trees of any description for *ráb*.

(3). They may, however, remove twigs of less than three inches in circumference from the forest fellings.

(b) Protected Forests.

(4). They may enjoy the privileges mentioned above in clauses (1) and (2) and in addition may lop the side branches of all but the 24 excepted kinds of trees from the unclosed portions; but no large branches for firewood may be cut under cover of the above privileges.

Firewood

(5). They may remove for fuel any dead-wood they find in the Protected and open portions of the Reserved forests, and, with the previous permission of the Divisional Forest Officer, in the closed portions of the Reserved forests, for *bonâ fide* home consumption, without payment of any fees, provided that no *khair* is to be removed as dead-wood for fuel, and that no logs of teak, blackwood or *tivas* are to be split up and removed as firewood.

Minor forest produce

(6). *Hirda* and *beheda* nuts, the myrobalans of commerce, *shikekái* or soap-pods. *Mowra* flowers and *ápta* and *tembhurni* leaves are strictly reserved to Government in all forests. But all other wild fruits and minor produce may be collected free, presumably for sale as well as home use, both in Reserved and Protected forests.

(7). They may also collect free for their own use *palas* leaves in the protected and open Reserved forests.

(8). They may take free of charge for their own use leaves from teak trees growing in Protected forests and in occupied numbers and from the trees in felled compartments of forests.

Kárvi and thorns.

(9). They may take thorns and *kárvi* from Protected forests free and without passes. *Kárvi* may also be removed free and without passes from the unclosed portions of Reserved forests. Thorns may be removed from unclosed portions of the Reserved forests on passes which will be granted freely without fee and without delay to applicants in such cases and to such extent as may seem advisable to the Divisional Forest Officer.

Earth and stones.

(10). They may take earth and stones free of charge for purely agricultural purposes from Protected forests and with the previous permission of the round guard in charge from the unclosed portions of Reserved forests.

(*B*). Special privileges (except in Sálsette):

(11). They may cut grass and collect and remove dead-wood for *sale*, free of charge in the Protected and unclosed portions of the Reserved forests and in the closed portions also with the previous permission of Divisional Forest Officer.

(12). They may also collect free of charge and for sale, *palas* leaves in the Protected and open Reserved forests.

(13). They may also take from the forests free of charge wood of the common descriptions for the construction of or repairs to their huts.

Government have also expressed their desire that the services of the wild tribes should be utilised as much as possible by the Forest Department in the collection of the reserved minor forest products such as *hirda*, *mowra*, &c.

The wild tribes of Kolába enjoy similar privileges.

Abuse of existing privileges.

11. We have referred in Section II of the preceding chapter to some of the abuses to which the privileges now enjoyed by the wild tribes are liable. Our circular questions 20, 21 and 22, the answers to which have been summarised at pages 62 to 65 of Volume III, were intended to elicit information on this point. It appears that of the privileges enumerated above in paragraph 10

the only one that has been abused so as to call for immediate remedy is the one by which the wild tribes are allowed to remove dead-wood from the forests by head-loads for sale as firewood. The very limited supply of naturally formed dead-wood is under cover of this privilege increased *ad libitum* by girdling trees and firing forests. The dead-wood so manufactured is removed to the nearest Railway station or bunder, whence it is exported to Bombay or Poona by timber merchants. It is no doubt true, as Mr. Crawley-Boevey remarks, that the forest tribes themselves are often mere ignorant tools in the hands of unscrupulous capitalists, who are really far more responsible than the forest tribes themselves for the destruction of the forests. However this may be, the mischief arising from the abuse of the privilege is of a very serious kind. Mr. Wilkins writes forcibly on this subject :—

"If the privilege is not withdrawn there is no saying what proportion the mischief may attain. Dealers, as it is, are establishing themselves every where in order to buy the firewood the wild tribes remove from the forests for sale: there is nothing to prevent them settling on the out-skirts of every forest and bringing with them their hordes of wild tribes, whom they employ as workmen for the purpose of ransacking the forests."

The privilege is clearly intended to provide means of subsistence to the wild tribes by allowing them to serve as carriers of fuel for *local* consumers, but it is liable to be abused in the absence of any restriction as to the size and description of wood which may be removed. It is therefore not to be wondered at if wood merchants have availed themselves of this agency to get the split wood locally known as *chiplis* for purposes of export without paying any seigniorage to Government. We have taken due note of this defect in the present system in the recommendations we have made in Section II. of the preceding chapter.

12. Government in their Resolution appointing the Commission have suggested for our consideration the following points in connection with the wild tribes :—

Questions for consideration.

(1). Are the wild tribes sufficiently paid for forest produce collected by them ?

(2). Are they as much employed as they might be by the Forest Department ?

(3). In short is every effort made to enlist their sympathies and identify their interests with those of the Forest Department ?

A somewhat expanded version of these questions was circulated by us among a number of experienced officials, whose answers will be found summarised at pages 46 to 65 of Volume III of this report. These replies, which contain much valuable information and many useful suggestions, have been fully considered by us.

Are the wild tribes sufficiently paid for their labour ?

13. As regards the first point, *viz.*, whether the wild tribes are sufficiently paid for forest produce collected by them, the answers of the Thána Forest and Revenue officials recorded at page 55 of the Summary (Volume III) show that there is no distinction observed as regards the mode of payment between the wild tribes and other ordinary labourers. Mr. Wilkins says that they are paid in cash for daily work at the ordinary rates paid for unskilled labour in the district, and at fixed rates for forest produce, according to the quantity and description of produce collected. Appendix E of the same volume gives the rates which have been fixed for the collection of the different kinds of produce. It is probable that the members of the wild tribes who live from hand to mouth are not always able to hold out for fair terms when they have to work for contractors. Mr. Thatte, the District Deputy Collector of Thána, says "the Forest Department rates of wages are liberal enough, but it has work for the wild tribes for a short time in a year and that too on a limited scale. The contractors employ wild tribes to collect forest produce, but *they pay them very low rates* of wages. In the rainy season cultivators employ the wild tribes at the transplantation and harvest times, and the wages they get are very liberal." The general conclusion we draw from all the evidence on the subject is that the wild tribes are liberally paid for the collection of forest produce or felling operations by the Forest Department when the work is carried out departmentally, but

General conclusion of the Commission on the question.

Chapter V.
WILD TRIBES.

that they fare worse when the work is handed over to contractors. It is certainly desirable in their interests that the collection of all forest produce should, as far as possible, be made departmentally and not through contractors.

Are the wild tribes employed by the Forest Department as much as they might be?

14. Opinions vary as to whether the wild tribes are employed by the Forest Department as much as they might be. Mr. Wilkins, the Divisional Forest Officer of Thána, apparently thinks that all that it is possible to do in this direction has been attempted. He says :—

"Wild tribes are employed as much as possible on forest operations, in fact they form the principal and in some cases the only source from which our labour is obtained. Every encouragement is given to them also to take employment as forest guards, and large numbers are now offering themselves for service in that capacity. There are 20 men of this class at present serving under me. Owing to reductions nearly 40 of these men had to be discharged. I hope however to re-employ them as soon as vacancies occur."

These guards were presumably temporary hands. Mr. Mádan, the Sub-Assistant Conservator of Thána, says that "their labour cannot at present be fully utilised owing to the departmental works being very few; but it is believed that when forests will be worked scientifically on an extensive scale, there will be enough of employment for them." Mr. Thatte, whose opinion is quoted above, and Mr. Bháu Rámchandra, the *mámlatdár* of Karjat, think that the labour of the wild tribes is not utilised as it ought to be. One of the Kolába witnesses (No. 2, Tulya bin Dhondya Kátkari, pages 189, Volume II.,) complained to us "that his people do not find employment on Government fellings, as Mháris, Ágris, &c., flock to the work and give them no chance."

15. On referring to the Forest Administration Report for 1884-85 we find that Rs. 22,500 were expended in that year on cutting of timber and Rs. 3,000 on firewood cutting. It may be fairly assumed that a considerable proportion of this has gone into the hands of the wild tribes. All the witnesses cited by the Thána and Kolába Associations fully admit that the work of collection of such of the articles of minor forest produce as have been farmed in later years still virtually remains in the hands of the wild tribes, although they are paid at somewhat lower rates for the collection of such produce by the contractors than they formerly got by selling it by retail in the market. The question whether the increased demand which the farming of any forest produce implies, and the consequent employment of the wild tribes on a large scale, does not fully make up for any difference in the rates, has been already considered by us under the head of 'Minor Forest Produce.'

Opinion of the Commission.

On the whole we are of opinion that the Forest Department has hitherto utilised the labour of the wild tribes as far as their limited operations have permitted, and that there is every reason to hope that much additional work will be found for the wild tribes when the completion of working plans will enable the Forest Department to carry out felling operations up to the maximum legitimate yield of the forests. All the labour in connection with the annual fellings should, in future, be entrusted to the wild tribes as far as possible. It will be all the more necessary that they should have the monopoly of this work as the privilege of removing head-loads of firewood for sale will, under the plan proposed by us, be strictly limited to small branches of felled wood in certain defined areas. They will, therefore, no longer, be able to earn anything by selling the better class of firewood to traders and other well-to-do persons under cover of the privilege of removing dead-wood from the forests.

The wild tribes should have the monopoly of the labour entailed by annual fellings.

Is every effort made to enlist their sympathies and identify their interests with those of the Forest Department?

Opinions of official witnesses.

16. It is more difficult to give a satisfactory answer to the third question, *viz.*, whether every effort is made to enlist their sympathies and identify their interests with those of the Forest Department. The Forest officers naturally consider that they have done their best in this direction. On the other hand several Revenue officers of experience express a very contrary opinion. We quote in the first place extracts from the replies of Messrs. Shewan and Horsley. These officers have not, we believe, served in the North Konkan districts. But their experience of forest settlement work in other parts of the Presidency entitles them to speak with authority on the general principles involved. Mr. Shewan says :—

"My experience is that no efforts are made to enlist the sympathies of the wild tribes and identify their interests with those of the Forest Department. The latter is apt to look

upon their very existence as the bane of the forests they inhabit. My idea on the contrary is that on the Forest Department should be cast the burden of providing those wild tribes with means of subsistence. Such provision should be regarded as a first charge on the forests."

17. Mr. Horsley writes on this subject :—

"The present troubles are, I presume, due to unsympathetic administration and too frequent turns of the screw. It certainly ought to be possible to administer the forests successfully without alienating the sympathies of the inhabitants, and that can, I believe, be done by working the forests fully through the agency of the inhabitants."

18. Mr. Crawley-Boevey, who served for a short time in Thána, says :—

"I must observe, however, that only a very insignificant proportion of the forest tribes can under any circumstances possibly be utilized by the Forest Department; and that their interests as a class are diametrically opposed to the present scheme of forest conservancy. As far as my information and experience goes, no effort is at present made to enlist their sympathies or to identify their interests with those of the Forest Department."

* * * * * *

"I am clearly of opinion that the industrial wants of the forest tribes demand the more careful consideration, for it is perfectly clear, that if all the principal articles of minor forest produce are reserved, and if at the same time all means of honest industry hitherto open to these classes are closed to them, they must necessarily either emigrate or starve."

19. Mr. Loch, who has served for many years in the Thána district and has a very intimate knowledge of all the forest questions which have arisen there, takes a more hopeful view. He says :—

"A considerable number of men belonging to the wild tribes are at present employed by the Department, and when the forests are more fully worked, a still larger number will get employment."

* * * * * *

"Numbers of the wild tribes might, where fit, be employed as guards and rewards of timber might be given for special service in putting out fires, &c. I think all that is wanted is the steady application of the principles at present in force. Much must always depend on the personal influence of the Forest officers and their principal subordinates."

20. Mr. Wilkins on the other hand (*vide* Volume III., pages 49 and 50,) does not consider it necessary or at all desirable to grant to Thákurs, Várlis, Kátkaris and other so-called wild tribes any special privileges in the forests beyond those granted to resident forest villagers for their own use. He thinks the withdrawal of the privilege of retail sale of forest produce will not cause hardship, as ample legitimate work can be found on the different forest operations in the district.

Opinion of the Committee of 1863.

21. Turning to the past forest history of the Konkan we find similar differences of opinion as to the treatment of the wild tribes. The Committee of 1863 appear to have taken a sanguine view as to the source of labour other than the collection and sale of forest produce open to those classes. They write :—

"Before taking leave of the question of firewood, the Committee would refer to a needy class of the population (the Kátkaris) who have hitherto earned their livelihood for part of each year by cutting firewood in the jungles and carrying it to the large towns for sale. It has been the custom of the Forest Department hitherto to allow this practice, charging a small fee on each head-load. It is with reluctance that the Committee would deprive these people of this source of livelihood; but they believe that that it would be impossible to carry out a system of proper conservation if the practice of giving these people free access to the Government forests is continued. The deprivation will not be felt so much now as it would have been formerly, for the sources of labour have of late years greatly multiplied, and less difficulty will be experienced in their obtaining other employment."

"It will be to the interests of the Forest Department to employ these people in cutting for Government, and the Committee learn with much satisfaction that many of them have already been hired for that work by the contractors employed in cutting fuel."

Opinion of Captain J. H. Lloyd in 1866.

22. On the other hand Captain J. H. Lloyd writing three years later (*vide* Volume II., page 376,) pointed out that it was vain to hope that the Kátkaris would find ample employment under the departmental system of cutting and advocated a more liberal policy. He writes :—

Forest tribes.

"There are certain forest tribes as Thákurs, Várlis, and above all Kátkaris, who gain a living by selling forest produce, taking service under the better class of cultivators during sowing and harvest time and by cultivating small patches of *varkas* crops on their own account. The condition of these people is a subject deserving of separate consideration. I refer to them here, because the

success of the new rules (if these are to be acted up to) is to a great extent in their hands, whilst their probable action in the matter has received scant attention. 'It is hoped that these people will find employment under the contractors cutting for the department,' but the employment which the department can furnish is limited to the forest which can be worked with profit, whilst the aggregate number of these tribes scattered over the forests is considerable. Moreover their employment appears after all to be at the option of contractors. Should these forest tribes take up the idea that they are harshly treated by the operations of the new rules, they are not unlikely to retaliate by burning and destroying the forests, and I do not think they could easily be prevented. They have spent their lives in these forests, are intimately acquainted with them, and the whole of the Forest Department backed by the Collectors will not be able to keep them out of the reserved tracts if they have a mind to go in. Were these people a more civilized and more influential class of society they would speedily remonstrate against measures likely to interfere with their modes of life, or get friends to do so for them, but they are very needy and ignorant and unable to comprehend the drift of measures until practically brought home to them when their remonstrance is likely to assume a shape which will benefit neither party. A timely consideration of the claims of these people will do more for the success of the new rules than any number of repressive measures."

Opinion of the Forest Committee of 1875.

23. The Forest Committee of 1875 expressed a similar opinion when they wrote (*vide* Volume II., page 369) :—

"The great difficulty is in dealing with the wild tribes who inhabit the forests. It is absolutely necessary to tolerate them, but the mischief they commit may be reduced to a minimum by restricting their *kumri* cultivation to the worthless trees; and their services may be utilized by employing them as foresters, their lands being given to them rent-free in consideration of their abstaining from injuring the reserved trees and protecting the jungle from depredations and mischiefs of all kinds. They should be taught to look upon the Forest Department, not as their natural enemies as at present, but as their protectors and as a means of obtaining a livelihood as wood-cutters and foresters. We feel sure that sufficient pains have not been taken to conciliate and employ the wild tribes."

General conclusion drawn by the Commission on the question raised above.

24. The general conclusion we draw from the evidence and from the opinions above alluded to is that the Forest officers are, as a rule, too apt to consider that their whole duty towards the wild tribes is fully accomplished when they have utilised their services according to their own convenience in all the forest operations of the year, and have paid them for their labour at fair rates. They fail to recognise the fact, which an impartial consideration of the evidence clearly establishes, that the occasional employment which they can provide for these classes can only partly compensate them for the loss of the wages they have hitherto earned as carriers and distributers of firewood and other produce amongst the local population. Mr. Wilkins, for instance, considers it unnecessary to allow them the privilege of removing any forest produce for *sale* in the belief that ample departmental employment can be given them as a set-off against the proposed withdrawal of their present privileges. But we are decidedly of opinion that even if the wild tribes have the monopoly of all the labour which will be entailed by the working of the forests, they will be unable to support themselves without having recourse to illicit practices, unless they are allowed in addition the privilege of collection and sale of forest produce which they have heretofore exercised. These privileges must, in the interests of forest conservancy, be placed under strict control as recommended in the preceding chapter; but their total withdrawal would, in our opinion, in the present condition of these classes, cause serious and unnecessary hardship. They can have no interest in the preservation of the forests, if the regulations make it impossible for them to earn a sufficient livelihood therefrom. So long as they are practically dependent on the forests for their living they should, we think, as Mr. Shewan observes, be considered a first charge on the forests.

Question whether the privileges granted to the wild tribes should be extended to other depressed classes.

25. At the same time we are strongly of opinion that it is undesirable as a matter of principle to permanently maintain or accentuate the present distinction between these wild tribes and other more settled but equally poor labouring classes, by special tribal indulgences. We have duly considered the question whether the privileges which it may be found necessary to grant to the wild tribes should be strictly limited to individuals of the Thákur, Várli and Kátkari races, or whether they should be extended to any other classes of the population. Many of the officers who have replied to our circular question on this subject (*vide* Volume III., pages 53-54,) would construe the term 'wild tribes' liberally so as to include all depressed classes living in or near the forest. Thus Mr. Crawley-Boevey writes :—

"I strongly recommend the extension of all privileges granted to the so-called forest tribes to all the depressed non-agricultural classes which are dependent upon labour. The Mhárs and other depressed classes are quite as much entitled to consideration as the forest or wild tribes. Their chief means of subsistence has heretofore been obtained by cutting and carrying wood and forest produce, and there is no valid ground that I can perceive for drawing an essential distinction between them and the forest tribes so called"

Mr. Horsley also writes :—

"Under the term forest tribes I would include all forest dwellers. There are forest tracts without any wild tribes properly so called, but with scattered villages of which the inhabitants would fully appreciate the value of the monopoly of forest work and collection of forest produce within their village limits. It would give them a sense of property in the forest and enlist them at once on the side of the Forest Department."

No distinction should be made in the matter of forest privileges between wild tribes and other depressed classes.

26. We fully concur in the opinion that no distinction should be made in the matter of forest privileges between the different labouring classes whom necessity compels to earn a living by collecting and distributing forest produce. We have provided for this in the arrangements we have recommended for the local supply of timber, firewood and minor forest produce in Sections II. and IV. of the preceding chapter. Under these proposals the wild tribes will have, in common with all other depressed labouring classes, the privilege of removing free of charge for home use, sale or barter, all the small branch wood available from the annual fellings. They will also enjoy, in common with all the poorer inhabitants of the forest villages, the privilege of removing, either for sale or domestic consumption, all unreserved minor forest produce. It will be unnecessary, therefore, if these arrangements are carried out, to extend the term 'wild tribes' to any other specified classes of the population, such as Mhárs, Mángs, Dublás, &c. Our object, in short, is to deal liberally and impartially, in the matter of all forest privileges and regulations, with the pauper forest population of the North Konkan as a whole, and to ignore, as far as present circumstances will allow, the existence of the wild tribes as a separate and peculiar section of the people. In course of time the only inhabitants who can now justly be called wild men will gradually merge in the general labouring classes. Any measures tending to retard this desirable consummation are, therefore, in our opinion to be deprecated. At the same time it will be necessary, for many years to come, to take account of the fact that there is a large unsettled population depending almost entirely on the forests, in one way or another, for their means of subsistence. If the exigencies of forest conservancy deprive these classes of the means of earning their living in one way, the obligation to substitute other legitimate ways must be fairly met. We believe this can be done by granting the wild tribes, in common with other inhabitants of forest villages, such privileges as are not inconsistent with reasonable conservancy, and by giving the wild tribes, as the term is now understood, in addition, the monopoly, as far as possible, of all labour entailed by departmental forest operations.

Cultivation within forest limits.

27. With regard to the question of cultivation within forest limits, there seems little difference of opinion as regards the disastrous effects of *kumri* or *dalhi* cultivation. We do not, therefore, recommend that the forest tribes should be allowed to revert to this method of cultivation in any forest lands. At the same time we see no reason why suitable plots within forests should not be assigned for ordinary dry-crop (*nachni*) cultivation to the wild tribes and other dwellers in the forests at the discretion of the Forest Department. In such cases the cultivators will of course be the tenants at will of the Forest Department, and will be allowed to cultivate only on such terms as the Forest Department may consider expedient both in the interest of the people and the forests. They may, for instance, with great advantage in many cases be given lands for cultivation free of rent on condition of their guarding the forests, conforming to all regulations, and planting trees in suitable areas, where this can be arranged.

Opinions of official witnesses.

28. Mr. Showan writes on this point (*vide* Volume III., page 46) :—

"As regards the question of cultivation other than *kumri* in forest tracts, I am of opinion that wherever there is a sufficiently mature forest growth the people should be invited to apply freely for plots of ground capable of affording permanent cultivation, especially plots convertible into rice and garden land. The policy of absolute prohibition of cultivation within forest limits is senselessly selfish. Cultivation could largely be permitted anywhere about forest hill sides, not to mention flat tracts, without the slightest damage to the forest, and to the very decided advantage of the revenue."

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29. Mr. Loch, though considering it preferable as a rule to exclude all lands allotted for cultivation from forests, considers that :—

"There may be some villages which should be treated differently in which the whole land may be entered as forest and the inhabitants may be given land to cultivate by the Forest officer."

30. Mr. Gibson, again, although he would not allow undefined cultivation in forest lands, would, where possible, mark off areas from forest for their cultivation.

Mr. Ebden also writes :—

"I believe that the demarcation of tracts is necessary in Thána on a sufficient scale to allow these people to pursue their wild processes of cultivation. But I believe at the same time that a good deal might be done for the mutual good of a limited number of them and of the forests by organized cultivation in tracts needing reboisement, cultivation being combined with the simultaneous planting of trees."

31. Other opinions both for and against the permission of cultivation in any form within forest limits will be found in the answers to circular question 14 summarised at pages 46 to 52 of Volume III. We do not think any hard and fast rule on the subject can be laid down, but we believe that in most cases it will be more to the interest of the Forest Department to allow the unsettled inhabitants of the forest tracts to cultivate suitable plots in the forests under proper supervision than to adopt the 'bag and baggage' policy which has found favour in more recent years. We believe that with liberal and sympathetic treatment the interests of these classes can be much more closely identified with those of the Forest Department than they have hitherto been.

Conclusion.

32. It will be seen from the preceding paragraphs that we do not propose to grant any special privileges to the wild tribes, which will not be shared by all the poorer inhabitants of forest villages. These privileges which will be summed up in the concluding chapter of our report are, we consider, necessary to enable the classes who are dependent on the forests to earn a sufficient living, and to prevent their becoming a source of anxiety in the future. The arrangements which we have recommended in the preceding chapter will enable the wild tribes, as well as any other poor inhabitants of forest villages, who are driven by choice or necessity to earn their living in this way, to take free of charge from the forests head-loads of firewood and unreserved and unfarmed minor forest produce, including *kárvi*, for sale or barter. Under existing orders the wild tribes have, except in Sálsette, the special privilege of cutting and removing grass for *sale* from the forests free of charge. The privilege, we believe, is a very nominal one, as there is practically no demand for head-loads of forest grass outside the limits of the villages in which they reside. It seems unnecessary, therefore, to continue this special privilege to the wild tribes. The only privilege which the wild tribes, as distinct from the other forest villagers need be allowed, is the one they now enjoy of taking free from the forests wood of inferior kinds for the construction and repair of their huts. Any regulations to prevent their doing this would be difficult to enforce, and so long as this privilege is limited to the material they actually require for this purpose, no appreciable injury to the forests need be apprehended. It is only in respect of this privilege, and of the monopoly of all labour in connection with departmental forest operations, that we consider it necessary that any practical distinction should be drawn between the wild tribes and other poor inhabitants of forest villages.

The only special privilege which need be allowed to the wild tribes as distinct from other residents of forest villages, is the one they now enjoy of taking inferior wood from the forests free of charge for the construction of their huts.

CHAPTER VI.

TREES IN OCCUPIED LANDS.[1]

Chapter VI

TREES IN OCCUPIED LANDS.

Our inquiries have convinced us that a satisfactory and permanent settlement of all doubts which now exist as to the respective rights of the State and the rayat in the tree-growth of occupied lands, and as to the policy of Government in this respect, is a pressing necessity. Whatever action Government has taken in this matter in the past or may take in the future has a very direct bearing on forest administration. The more ample the supply of wood from private holdings, the less will be the local demand on the forests, and the less the need for supplying that demand to the local population on specially favourable terms. The Thána District is the principal source of the firewood supply of Bombay; the local demand for fuel is also unusually great, and the conditions of cultivation necessitate an abnormally large consumption of ligneous vegetation for ash manure. The preservation of the tree-growth in occupied *shindád* lands as well as in State forests, is therefore of vital importance both in the interests of agriculture and the general public. The problem is how to ensure that an occupant, while having the free enjoyment of the tree produce of his private lands for all reasonable domestic and agricultural wants, shall not destroy this source of supply for temporary profit, and replace it by supplies drawn from the forests under cover of privileges, for which the only justification is the supposed insufficiency of his own land to satisfy his own *bonâ fide* wants as a cultivator.

Difficulties in the way of settlement.

2. The question of rights to trees in occupied lands in Thána is complicated in no ordinary degree. The extent of the general prohibition against cutting teak imposed before the Survey is doubtful. Different conditions as regards trees in private holdings were imposed at the Survey Settlement of different *tálukás*, and the conditions themselves were not always so clear as to prevent doubts arising as to their intentions. Much confusion has been caused by the uncertainty as to what rules were applied in different *tálukás* as a part of the Settlement. At one time it was the declared intention to get rid once and for all of all Government rights in the reserved trees. In fulfilment of this intention some trees were sold to occupants in some *tálukás*; some were cut down on the refusal of occupants to purchase them; others, including trees of too small growth, when first counted, to be included in the valuation, have remained unsold, or have been sold to persons other than the occupants. Intricate questions also arise as to rights to after-shoots in certain cases.

3. There is no doubt from the evidence before us that the great uncertainty which prevails in the minds of the people and even of responsible Government officials as to the policy and action of Government in this matter, and the scope and intention of the numerous and often conflicting orders passed on the subject, has given rise to a very general feeling of insecurity in the tenure of all tree property in the Konkan districts—a feeling which is much to be regretted, and which every effort should be made to remove.

4. To obtain a clear view of the whole subject and ascertain the present position of Government and the rayats as regards all the matters in dispute, it is necessary first of all to show how the user of trees in occupied lands has been regulated from the earliest times of which we have any record up to the present date; and to describe the effects of the Survey Settlements of the different *tálukás* and the various orders passed from time to time by Government as regards trees in private holdings. We shall first endeavour, therefore, to give as complete

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[1] The history of the orders relating to trees in occupied lands enumerated in this chapter of the report has been compiled from the following sources:—

1. Thána Gazetteer;
2. Mr. Nairne's Memorandum on the rights to trees in occupied lands in the Konkan;
3. Printed book of the Pendse case;
4. Précis of correspondence drawn up by Mr. Mulock when Collector of Thána, in 1882.
5. Mr. Atkins' report on the Kalyán teak frauds;
6. The statements of the *mámlatdárs* in the Thána District made before the Commission.

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a history as possible of all action taken by or on behalf of Government, by which the rights of occupants to trees in their holdings have been assured, restricted, or in any way affected, and shall then submit our recommendations as to the action which we think should now be taken to assert the true policy of Government, remove existing doubts, and ensure a satisfactory settlement of the question.

State of things under former Governments.

5. Unfortunately there appears to be but little direct evidence of the extent to which the former Governments exercised seigniorial or other rights over the trees in *occupied* lands. In the Tipnis case seven documents from the Poona *daftar* were put in to prove that teak trees were held as royalties under the late Government. Six of these, however, apparently did not apply to private holdings. The seventh—which the deciding Judge said nothing about—stated* that "'in the above *taraf* the felling of teak has been recently prohibited'; and this prevented the cultivation of *varkas* which had been lately taxed, but in order to allow of the cultivation it was ordered that 'the teak jungle shall be preserved where it is thick, where it is thin let the rayats clear it.'" This clearly refers to the *varkas* or *dalhi* cultivation, and it is well known that under the Native Governments and for a long time under the British rule also, there was no private property in *varkas* land, although the communal right of the villagers to use such lands for taking *ráb* and grass and for occasional cultivation was admitted. Regulation I. of 1808 shows that some revenue was obtained by the former Governments in the shape of fees (*wan makta*) on wood removed for sale from the hills, but the provision quoted in the Prècis† to the effect that no duty should be collected from the proprietors of *serrotore* trees felling their own and carrying the same for sale to Bombay would lead to the presumption that there were no royalty trees in lands held under any permanent tenure, such lands consisting in those days of rice or garden lands only. Indeed the subject was probably considered of little importance, the produce of inland forest being of little value without means of export.

* *Vide* Mr. Nairne's memorandum, Volume IV, pages 128 to 141.

† *Vide* Volume IV., page 2.

From the introduction of the British rule to the time of the Survey.

6. It does not appear that any attention was paid to the preservation of timber in the early days of the British rule, and from the acquisition of the different parts of the Konkan up to 1839 there was no prohibition on the cutting of teak.

7. In 1831 the Collector of Thána in reporting‡ to Government on the subject of the Government teak forest in his *zilla* stated that "throughout Salsette and also in most parts of the Southern Konkan all teak trees, wherever growing, were considered the property of the State. The prohibition against cutting them in the Southern Konkan was removed (with the exception of the reserves of Málvan, Suvarndurg and Tudil) and Government gave up to the rayats all claims it might have on these trees. In Salsette, however, the prohibition has been retained and Government still possesses a right to all teak trees, except in villages which have been made over to proprietors." It is noticeable that this report purports to deal with the teak forest of the *zilla*, and yet makes no mention of teak growth in any part of the Northern Konkan except Salsette. It is possible, however, that the term Salsette as used by the Collector included all the Northern as distinguished from the Southern Konkan.

‡ Exhibit 212, Pendse case, *Vide* Volume IV, page 202.

First prohibitory order regarding cutting of teak - 1841

8. It was about the year 1837 that Government began to see the necessity of introducing a system of forest conservation in the Thána District. The correspondence which took place at the time between the Collector of Thána, the Revenue Commissioner and the Government, and which eventually led to the issue of the prohibitory orders of 1841, is summarised in paragraph 4 of the Prècis. The orders alluded to are translated and printed as Exhibit Nos. 314 and 314A (pages 246 and 247) of the Pendse Case. The first part of the circular runs thus:—

"The rayats of the said *táluka* have been cutting down teak trees, including even promising ones, from the Government forests to such an extent

as altogether to destroy them. To prevent this an order containing the following clauses has been issued to you :—

1. No one should on any account be allowed to cut without an order from Government any teak post, rafter, &c. The *pátil, faujdár, kárbhári* and *balutdárs* such as Mhárs, &c., should be enjoined to enforce this order. Should any person, however, cut any teak tree owing to want of proper management, the *vatan* of the person in whose village such cutting may have taken place will be attached and a stringent order issued. The usual annual cutting of the *injáili* trees other than teak trees should not be prohibited."

9. This order restricts the cutting of teak without permission from the *Government forests.* It is clear from the orders of Government passed* from time to time that they sanctioned the restrictions placed by the Collector on the indiscriminate cutting of teak, and that *shindád* or *ráb* lands were included in the term 'Government forest' used in the circular.

* These have been summarised at pages 20 to 27 of Mr. Jervoise's memorandum in the Pendse case.

First specific recognition of the rayats' property in trees in lands of hereditary occupancy—1847.

10. We now come to the first specific concession made by Government with regard to trees as noticed in paragraph 26 of Mr. Nairne's memorandum. In 1847 the rule afterwards known as Survey rule 10, and in exactly the same words, was, after a correspondence with several authorities, sanctioned by Government for the Thána Collectorate (February 12th, 1847), but with this explanation that "in recognising the rayat's property in trees in lands of hereditary occupancy, Government continue to reserve to themselves the property in all trees grown in *gatkul* lands, waste places and *kurans*, and that the right granted to occupants on application to cut for their private use in *gatkul* lands is to be considered as permissive and not proprietary." The Revenue Commissioner in forwarding this wrote (No. 1702, October 23rd, 1847) :—"The intention, it would seem, is that any appropriate prohibitions which may have been established by local usage should be upheld."

Military Boards' circular of 1847 relating to planting of trees by rayats.

11. Another set of rules was framed in the same year. These were sanctioned by Government on May 24th, 1847, and were put forth by the Military Board, which then had under its charge all matters relating to Forest. The letter addressed by the Military Board to the several Collectors in the Presidency, and the draft notice, are given at pages 135 to 138 of the Pendse case. The extracts given below bear on the question of right to trees in occupied lands :—

7th.—Impelled by these considerations, Government has resolved to undertake measures and to expend money for the purpose of lessening the evils complained of, and therefore decrees—

1st.—That all *zamindárs* and *vatandárs* be recommended to plant useful trees of easy growth in waste corners of their own lands and in waste corners about villages; no foreign trees or trees requiring more than common care need be planted.

2nd.—That those who choose to plant in their own grounds will have the trees recognized as their own property, just as the trees now growing thereon are.

7th.—Government is pleased to subjoin to this notice a list of trees deemed best suited to each division of the Presidency.

8th.—That none of the above rules are to be held as in any way interfering with the orders at present in force regarding teak trees.

In the list alluded to in the 7th clause 'teak' is mentioned as one of the trees fitted for the Konkan. The orders at present in force mentioned in the 8th clause are undoubtedly the orders of 1841 absolutely prohibiting cutting teak, without express permission, *from the Government forests.*

Position of Government and the rayats with regard to tree-growth prior to the introduction of the Survey.

12. From the above the following facts are deducible :—

(1). That the felling of teak from Government forests without permission was universally prohibited in 1841.

(2). That lands in which sporadic cultivation of dry crops was carried on, or from which the cultivators were in the habit of taking branches and

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leaves for *ráb* or wood-ash manure were treated not as private lands but as Government waste.

(3). That the right of holders to all trees, including teak, in permanently occupied lands, which, prior to the Survey, consisted of rice fields and gardens only, was admitted by the rules and proclamation of 1847.

Settlement of trees at the Survey.

Change in the tenure of the *varkas* land.

13. Before describing the effect of the Survey Settlements on the right to trees in occupied lands, it is necessary here to allude to the change in the tenure of the *varkas* land which was effected at this time. As stated above, both under the former Governments and under the British rule the *varkas* lands of the country were treated as Government waste and "'*dalhi*' tax was levied as rent on spots of ground on which the hill people raised small crops of *náchni* grains and other dry and coarse grains and some vegetables," the user of the *varkas* lands for *ráb* materials and grass being allowed free to all cultivators. Most of these lands, originally held by village communities in common, became in course of time, as known in English law, shifting severalties. These shifting severalties again gradually gave way in their turn to definite allotments to individuals, as the increase of population and general progress following the British conquest made *varkas* lands more and more valuable. Thus in 1852 Captain Wingate in reporting on the plan of Survey which he proposed to adopt for the Thána District remarked :—

> "The *varkas* of the Konkan has nowhere that I could discover been divided into fields or properties with recognized limits. There is indeed a *loose sort of apportionment* usually obtaining, by which the cultivators refrain from interfering with each other, and generally confine their cultivation of *varkas* to the particular localities or hill-sides to which they have been accustomed to resort. * * Particular parts of the hills are also understood as being allotted to the rice lands to provide grass and leaves for burning on the latter as manure, but the limits of these portions are by no means well defined."

14. Captain Wingate proposed to measure off the garden, rice and *rabi* lands into separate numbers, and to throw all the remaining *varkas* in one block. He further recommended that the forest rights of Government should be reserved everywhere over the *varkas* lands and the existing rules for the protection of particular trees upheld.

15. Captain Francis who first settled the Khálápur *peta* in 1855 adopted the principle suggested by Captain Wingate, but Government expressed their disapproval of the system and directed the separate measurement of the *varkas* land in the occupation of the rayats and the assessment of each of these holdings. These orders were duly carried out in almost the whole of the district and the result was the conversion of a very large extent of communal property into individual holdings. Henceforward the holders of allotted *varkas* acquired by virtue of their tenure all the rights of survey occupants, except in so far as they may have been reserved at the Survey.

Effects of the Survey Settlements as regards trees in occupied land.

16. Turning to the settlement reports, the several orders* issued by the Survey Department to the *mámlatdárs* and a memorandum, *vide* Vol. IV, pages 124—127, which has been carefully drawn up by Mr. Ebden, C. S., we find that the rights to trees in occupied lands in Thána, including the allotted *varkas* numbers, were disposed of at the Survey Settlements as described below :—

* *Vide* Exhibits Nos. 3, 23, 40 and 80, in Volume II., Part I.

Karjat (Exhibit No. 3).

Karjat.— Joint Rules promulgated by Colonel Francis with modification of Rule X., reserving trees under conservation of Forest Department. Government Resolution No. 9094 of 1885, *vide* Vol. IV, page 197, passed on a reference from the Kolába District has since limited the reservation to the trees specified in Section 40 of Land Revenue Code, that is, teak and blackwood.

Kalyán.

Kalyán.—No distinct orders about trees were passed. Joint Rules were printed by order of Government in 1861 and promulgated in the *táluka*. It is presumed that the Joint Rules were made applicable without modification.

Murbád.

Murbád.—No orders traceable. In his No. 371 of 1862 Colonel Francis refers to Joint Rules as being in force in Murbád.

Bhivandi.—Colonel Francis in his *yádi* informed the *mámlatdár* that the printed rules—Joint Rules—would follow. They were subsequently promulgated in the *táluka.*

Bhivandi, Exhibit No. 40.

Salsette.—No orders traceable. Mr. Bell, First Assistant Collector, in December 1861 raised the question of ownership of trees in Salsette *varkas* numbers. Colonel Francis considered Joint Rule XI applicable. The Collector, however, appears to have taken a different view. He stated (No. 238, dated 4th February 1862) that Joint Rules relating to trees were not applicable to the Konkan and Government rights should be maintained. It is believed the Joint Rules were promulgated in the *táluka.*

Sálsette.

Bassein.—Same as Bhivandi.

Bassein.

Máhim.—No orders traceable. The disposal of the rights of Government under Ellis' Rules appears to have been effected by the Survey officers simultaneously with the settlement.

Máhim.

Umbargáv peta.—No orders traceable. In 1882 Government decided that the provisions made at the Dahánu Settlement applied to Umbargáv, but the order has been lately rescinded (*vide* Government Resolution No. 2345, dated 25th March 1886, page 198, Volume IV.), and it has been ruled that the occupied *varkas* lands in the *peta* should be treated in respect of the trees growing on them under paragraph 1 of Section 40 of Bombay Act V. of 1879. Government observe that the Collector reported in 1868 that the rights to trees in *málki* numbers in the Umbargáv *peta*, which was settled in 1863-64, were disposed of under Ellis' Rules. With regard to later *varkas* allotments which were recommended by the Commissioner, N. D., to be distinguished from the old *málki* numbers, Government have asked the Commissioner to explain the special conditions on which they have been assigned, and in case no such conditions have been imposed, to explain why he (the Commissioner) proposed to exclude these allotments from the operation of the present order.

Umbargáv *peta*.

Shahápur and Váda.—Excepted from the operation of the Ellis Rules. All trees reserved. Free use for domestic and agricultural purposes of all wood except teak, *tivas* and blackwood. Bamboos allowed for domestic use.

Sháhápur and Váda (Exhibit No. 23).

Dahánu.—Trees in *varkas* reserved, rayats being allowed to cut for domestic and agricultural uses in *varkas* all trees but teak, blackwood and *tivas.*

Dahánu (Exhibit No. 80).

Mr. Ebden in his memorandum (*vide* Vol. IV, page 126) states that taking into consideration the provisions of Sections 40 and 44 of the Bombay Land Revenue Code and of the rules under the Indian Forest Act, the following general conclusions may be drawn :—

"I.—Teak, blackwood and sandalwood belong to Government except in cases where purchase was effected or special concession made by or to individuals, no general concession by clear and express words having been made in respect of these trees.

"II.—Fruit trees belong to the occupants unless the produce or share thereof is received by Government, in which case the occupant has option of purchase at a valuation under Government Resolutions Nos. 52 and 535 of 1875.

"III. Junglewood—

(*a*). In Karjat and Khálápur *peta* and Panvel timber trees which are represented by the kinds mentioned in the *Remark Column* I. [1] are reserved to Government unless the occupant can show that under Ellis' Rules they have been bought by or specially conceded to him.

(*b*). In Kalyán, Bhivandi and Bassein the right belongs to the occupant, the Joint Rules having been introduced in an unmodified form.

(*c*). In Murbád and Salsette the presumption is that the Joint Rules were also introduced in the same unmodified form, these *tálukás* having been settled concurrently with Kalyán, Bhivandi and Bassein.

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1. Teak, *sisu, ain, khair, hed, nána, dhávda, kalam, asána, bibla, kinjal, jámbu, sivan, tivar, koshimb*, and *kinai.*

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(*d*). In Máhim Ellis Rules having been introduced by the Survey officers the presumption is that each case was disposed of under these rules.

(*e*). In Shahápur, Váda and Mokháda *peta* all trees were reserved, the privilege of use for certain purposes being conceded but not that of cutting for sale or profit.

(*f*). In Dahánu and Umbargáv *peta* trees in *varkas* only were reserved, the privilegé of use for certain purposes being conceded but not that of cutting for sale or profit.

(*g*). In Uran *peta* the Survey Rules of 1869 apply."

17. The above resumè of the orders on the subject shows that three different arrangements appear to have been carried out, or were intended to have been carried out at different times.

Joint Rules.

18. In the earlier settlements, that is, the settlements of Kháláپur, Nasrápur and Panvel, Colonel Francis introduced the Joint Rules with modification of Rule X. In Kalyán, Bhivandi and Bassein, and presumably in Murbád and Salsette, the Joint Rules were made applicable without modification. This took place between 1854-55 and 1861-62. In the interval Colonel Francis informed the Collector that Rule II. of the Joint Rules had not been applied to Thána and recommended that it should not be applied (No. 588 of 31st December 1858). The Revenue Commissioner informed the Collector to the same effect (No. 743, dated 30th April 1859).

Dahánu and Kolvan Rules.

19. In Dahánu and Kolvan the enjoyment of the tree-growth in occupied lands was allowed only conditionally by the terms of the Survey Settlements introduced in those *tálukás*.

The Ellis Rules.

20. In February 1862, Mr. Morgan, the then Collector of Thána, made a reference to the Revenue Commissioner on the subject of the right to trees in the surveyed districts. Mr. Ellis, the then Revenue Commissioner of the Northern Division, replied to this reference in his letter No. 2545, dated 13th October 1862. This letter is important as it embodies what are known as the Ellis Rules which took the place of Rules II., X. and XI. of the Joint Rules in Thána. It is therefore, quoted here *in extenso*:—

"In reply to Mr. Morgan's letter* No. 238 of 4th February last, I have the honor to state that after careful consideration of the subject in all its bearings, I am of opinion that the following rules should guide you in disposing of the right to trees in surveyed lands.

* Regarding the rights to trees in surveyed districts.

"2. It is hardly necessary to premise that the rules of the Survey Joint Report in regard to trees in the Deccan have not been applied to the Konkan.

"3. The main principle to be kept in view is that Government should withdraw as much as possible from interference with a rayat's holding, and in order to do so all the existing rights of Government in trees should be abandoned, except when maintained for the conservation of timber. Whenever the rights of Government are worth disposing of for money, the value should be taken once for all, and future interference abandoned.

"4. The trees may be divided into three classes;—

I.—Fruit Trees.

1. When the produce or a share of the produce, has been annually received by Government.

2. When the whole produce has been enjoyed by others.

In the latter case no interference is called for. In the former case the Government right should be offered to the holder of the land at a maximum of 10 years' purchase calculated on the average receipts and a lower price should be offered according to the age and condition of the trees. If the offer be refused by the holder of the land, the right should be put up to auction and sold to the highest bidder. If Government have hitherto shared the produce with a private individual, it will make no difference, as of course, only the Government right will be disposed of.

II.—Teak and Blackwood Trees.

1. In reserved numbers to be carefully preserved, and to be in charge of the Conservator of Forests.

2. In other than reserved numbers,

(*a*). When the trees are numerous, to be specially entered in the records as forest rights reserved;

(*b*). When the trees are thin and few to be offered to the holder of the land at a valuation, and if refused, the trees to be cut down and sold. In either case the proceeds to be credited to the Forest Department.

III.—Jungle trees of all other kinds.

1. On reserved forest numbers to remain under the Conservator of Forests.

2. Trees on the side of, or close to, a road to be preserved as hitherto.

3. On all other lands to be given up *gratis* to the occupants of the lands.

"5. In future, on application for the occupancy of waste numbers, the trees on the land will be sold with the right of occupancy.

"6. Wherever there are, in *bágáyat* lands, trees of which the annual produce has hitherto been separately brought to account, the trees will be given up gratis to the occupants, if the said produce has been taken into account in fixing the assessment; otherwise the trees will be disposed of once for all according to the foregoing rules.

"7. Whenever trees are disposed of to an actual occupant, the Collector may allow the price to be paid by instalments, but the instalments should not exceed four in number, nor extend over a longer period than one year, unless the amount exceed Rs. 150, in which case two years may be allowed. When the trees are sold by auction, the payment should be immediate."

21. Exhibit No. 47 of Thána Oral Evidence (page 147, Volume II) gives the substance in vernacular of Mr. Ellis' letter No. 2545 above referred to and communicated to the Second Assistant Collector. The difference in the rendering of paragraph 2 of the letter is noticeable. The English paragraph is :—

"It is hardly necessary to premise that the Rules of the Survey Joint Report in regard to trees in the Deccan have not been applied to the Konkan."

The literal translation of the Maráthi version is :—

"It may *perhaps be necessary to assume* that the rules incorporated in the Joint Report about trees in the Deccan were not made applicable to the Konkan."

This misinterpretation of the English version may perhaps be due to the confusion in the minds of the local officers as to whether the Joint Rules about trees were made applicable to the Konkan or not.

Application of the Ellis Rules.

22. After the promulgation of the new rules the Survey Settlement was first introduced in Máhim *táluka*, and it is presumed that the tree settlement of that *táluka* was effected under the Ellis Rules by the Survey officers.

23. In Kolvan (present Váda and Shahápur *tálukás*) and Sanján (Dahánu) the Ellis Rules were not enforced, but as stated above a special settlement of trees was recommended and was approved by Government. In 1870 however, probably owing to some misunderstanding, the royalty trees in these *tálukás* were also partially disposed of under the Ellis Rules, and this action was subsequently confirmed by Government (*vide* Government Resolution No. 3701, dated 14th May 1883).

24. As regards the remaining *tálukás*, namely, Karjat, Kalyán, Bhivandi, Salsette, Murbád and Bassein, it is doubtful whether the Joint Rules as promulgated by Colonel Francis about the time of the settlements, or the Ellis Rules, are to be held applicable. In Atmárám Nilkanth Tipnis' case as well as in 2 or 3 other cases the District Judge held that the Joint Rules must be held to be applicable and that the modifications made by Colonel Francis not being authorized by Government were *ultra vires*. In the Pendse case the High Court have not given any decided opinion on the point, but they state "that either Rule X of the Joint Rules was not legally introduced at all or it was introduced subject to a modification made in it by Captain Francis." Lately when this same point was raised in Kolába, which was a sub-district of Thána,

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when the Survey Settlements were introduced, the Legal Remembrancer advised Government to hold that the Joint Rules, or at any rate Rule X., were never legally introduced into that district and Government have accepted that position (*vide* Government Resolution No. 3998, dated 4th June 1886). The grounds on which this decision is based appear to hold good equally in the case of all the present Thána *tálukás*.

Ellis' Rules confirmed by Government.

25. The Ellis Rules had not received the formal sanction of Government before their promulgation. Their principle, however, was approved of in Government Resolutions Nos. 945 of 15th June 1863, and 1106 of 26th March 1864, paragraph 8. In one Mr. D'Almeida's case they went before Government for the first time and in a subsequent Resolution No. 3827, dated 13th October 1868 (Exhibit No. 94, Pendse case, Vol IV., page 203), Government directed the Collector to give effect to the said rules to the extent indicated in a previous Resolution (No. 2097, dated 27th May 1867).

Object of the Rules.

26. The object of the Ellis Rules was identical with that of the framers of the Joint Rules II., X. and XI., namely, "the discontinuance of all interference on the part of Government with the trees growing on the land of rayats," and to secure this object both the sets of rules provided "the means of getting rid of the Government rights in trees growing on rayats' lands" once for all.

Comparison of the Joint Rules with the Ellis Rules.

27. The following comparison of the two sets of rules will show the difference in the *modus operandi* adopted to secure the common object :—

The Joint Rules.	The Ellis Rules.
II. In the case of valuable fruit and other trees standing in assessed waste numbers the right of property in these trees and of occupancy in the field should be sold by auction once for all.	Paragraph 5. In future on application for the occupancy of waste numbers, the trees on the land will be sold with the right of occupancy.
X. Proprietors of *inám, judi* and *mirás* lands, having possession of the same, have the right of cutting down, or otherwise disposing of all trees growing therein, and also holders of Government fields of which they have been in uninterrupted occupancy from a period anterior to the age of the trees or for a period of 20 years or who have purchased the trees under the provisions of Rule II.	Paragraph 4. Trees may be divided into three classes :— I. Fruit trees, II. Teak and blackwood trees, and III. *Injáili* (jungle) trees.
XI. Other holders must obtain permission to cut down trees and will in the event of permission being given be required to plant two trees for every one cut unless exempted by the Collector.	(*a*) Fruit trees in occupied lands wherever reserved to be offered to the occupant at upset price or disposed of by auction. (*b*) Teak and blackwood :— 1. In reserved numbers (Reserved Forest to be preserved and in charge of the Forest) Department. 2. In other than reserved numbers, that is, occupied lands and unreserved waste lands, (1) When the trees are numerous, to be specially entered in the records as forest rights reserved ; (2) When the trees are thin and few to be offered to the holder of the land at a valuation, and if refused the trees to be cut down and sold. (*c*) Junglewood :— To be given up gratis to the occupants of the lands except road-side trees.

Scope of the Joint Rules as established by subsequent decisions and opinions.

28. In order to get a clear idea of the exact scope of the Joint Rules quoted above, it will be useful to refer to the following orders and opinions on the subject :—

29. Rule II.*—"An occupant may sub-let or dispose in any way he pleases of trees bought under this rule." Further, "an occupant's right or a right derived from him over trees bought under this rule holds good only so long as he retains the occupancy of the survey number in question. Should he resign the number or transfer the occupancy to another person, the right over the trees lapses, or is transferred to the new occupant."

* Footnote to Rule II. given at page 31 of the Survey and Settlement Manual.

30. Rule X.—With reference to the question how the term of occupancy of 20 years mentioned in Rule X. is to be counted, Captain Wingate (one of the framers of the Joint Rules) reported † in the case of a *kuran* land from the Poona District referred to him as follows:—

† Exhibit No. 276 H., page 218, Pendse case, Volume IV, page 206.

"The term of occupancy specified in Rule X. which conveys to the holder a right of property in trees is not, in Captain Wingate's opinion, to be dated from the introduction of the Survey Rules, but from the commencement of the incumbent's occupation as a holder paying the ordinary rates of assessment."

"Captain Wingate is therefore of opinion that if D and his ancestors have held the land in question for a period of 20 years, he has the absolute right of disposing of the whole timber growing on it under Rule X., and that if his occupancy is of more recent origin he has, under the same rule, an equally absolute right of property in all trees that have grown up since the land came into his possession."

31. In submitting to Government Captain Wingate's letter, from which the above-quoted extracts are taken, Mr. Revenue Commissioner Courtney expressed his entire concurrence in the opinion given by Captain Wingate and Government finally ruled that the opinion "be acted on in disposing of this and similar cases." The Government letter bears the signature of Mr. H. E. Goldsmid as Secretary. It is to be remembered that he was also one of the authors of the Joint Rules. Mr. Naylor, the Remembrancer of Legal Affairs, has recently expressed a similar opinion on the same point. He says: "Interpreting the Joint Rule No. X. judicially, I am of opinion that its intention was to admit an occupant's right to the trees in his holding if he could at any time establish 20 years' continuous occupancy. I am led to this conclusion by the fact that the Joint Rules were not rules for the guidance of Survey officers when making a Survey Settlement, but were rules for 'the future administration of the Survey Settlements' (*vide* paragraph 84 of the Joint Report), *i.e.* for the guidance of the Collector and his subordinates in determining questions of right and of administration after the Survey Department had done its work. Moreover, the provision as to occupancy 'from a period anterior to the age of the trees' occurring in the same Rule (No. X.) seems obviously to have been intended to apply to future as well as past occupancy, and there is no distinction made in the applicability of this provision and of the 20 years' provision."

32. Rule XI. was cancelled in all Collectorates where it was then in force by Government letter No. 734, dated 27th February 1866, as it was "calculated to destroy the feeling of right of property in trees and to deter rayats from preserving them."

Ellis' Rules less liberal, but perhaps more applicable to the circumstances of the Konkan.

33. Now turning to the Ellis Rules we find that they were less liberal to the land-holders than the Joint Rules, but perhaps more applicable to the circumstances of the Konkan. The Joint Rules made a broad distinction between proprietary holders and holders of Government lands. The Ellis Rules take no notice of proprietors as distinguished from other occupants. The Joint Rules allowed old occupants, *i.e.* those holding lands from a period anterior to the age of the trees or for a period of 20 years, the full benefit of prescription and the fruit of their own labour without exception, and the new occupants all the wood they required except for sale with the previous permission of the village officers or the *mámlatdár* on condition of planting two trees for every one cut down. The Ellis Rules gave nothing gratis to anybody except the *injáili* trees, and directed the reservation of forest rights when the teak trees were numerous. With regard to the enjoyment of the jungle trees and the disposal of future occupancy rights of waste lands the provisions of both were identical.

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34. It must be noted here that the Ellis Rules were modified or confirmed in some important particulars by the subsequent action of the local authorities or Government.

Subsequent modifications in Ellis' Rules.

35. It appears that Mr. St. John Gordon, Collector of Thána, issued a circular order requiring the holders of trees to obtain previous permission before they cut them in certain cases. In 1866 when the cancellation of the Joint Rule XI. was promulgated in the district, one Mr. D'Almeida, a land-holder in Salsette, complained of his not being allowed, without the permission of the *mámlatdár*, to cut trees on his own land. In reporting on this complaint the Collector stated that the Joint Rules in regard to trees were never made applicable to the Konkan and that the rules which were in force were those laid down by the late Revenue Commissioner, N. D., in his letter No. 2545 of the 13th October 1862. The Revenue Commissioner reiterated this statement and added that as the Joint Rules were never applied to Thána, the petitioner could not get the benefit of the Circular No. 734 of 1866, which cancelled the Joint Rule XI. Government in their Resolution No. 2097, dated 27th May 1866, acknowledged that the Joint Rules did not apply to Thána, but ruled that the practice of requiring permission was equally opposed to the spirit of Ellis' Rules and that it should be put a stop to, except in the immediate proximity of the Reserved forests. The other provisions of the Resolution are also important as expressing general intentions of Government on the subject. Government stated :—

"The practice is quite opposed to the spirit of the rules quoted to support it. Those rules, like the Government Circular No. 734, dated 27th February 1866, both had for their object the discontinuance of all interference on the part of Government with trees growing on the land of rayats.

"2. The circular was not applicable to Thána, because the rule of the Joint Report which it cancelled was not in force in that district; but, nevertheless, had any similar rule been in force, it would have been the duty of the Revenue Commissioner to cancel it.

"3. The rules of the late Revenue Commissioner distinctly provided the means of getting rid of the Government rights in trees growing on rayats' land, and there is nothing in those rules to justify constant interference and enquiry by the necessity for a rayat to obtain permission to cut down trees growing on his own land.

"4. The late Mr. Gordon appears to have made such a rule for a different object—the protection of the Government forests. In villages close to Government forests, the rule may be expedient equally for the protection of the rayat from the liability to have his wood seized on suspicion, as for the prevention of plunder of Government forests.

"5. But, except in the immediate proximity of the Reserved forests, there are no valid reasons for continuing the rule, and, except in such situations, it should forthwith be abrogated."

36. On the receipt of the above Resolution the Conservator of Forests made a representation to Government that much practical inconvenience would in all probability be experienced in carrying out the instructions therein conveyed; but Government refused* to modify their orders and ruled: "The Acting Collector should be directed to give effect to the rules of the late Revenue Commissioner to the extent indicated in the Government Resolution quoted by the Conservator of Forests. There is an insuperable objection to making the pass system applicable to land-holders in the position of Mr. D'Almeida on whose petition the former Resolution was passed. It will be easy to carry out the limitation if the Collector will bear in mind that persons owning land near Government reserves will gladly ask for passes rather than run the risk of their timber carts being detained for inquiry."

* Exhibit No. 94, Pendse case, page 38; Government Resolution No. 3827, dated 13th October 1868, Volume IV, page 203.

37. Such cases ought to be covered now by the rules under Section 41 of the Indian Forest Act, provided the word 'timber' used in that section is distinctly held to apply to wood removed from private lands. We have treated this point separately in Chapter VIII.

38. As stated above, the Ellis Rules directed the reservation of forest rights in all cases when the trees were numerous. This provision does not appear to have been enforced. Mr. Atkins, who lately made an exhaustive inquiry as regards the disposal of reserved trees under these rules, remarks (Report No. 80, dated 26th July 1884, paragraph 14) "that though the Ellis Rules

were certainly intended originally to apply only to numbers in which the trees were thin and few, yet there is not a doubt that the Collector, perhaps by mistake, did actually apply these rules indiscriminately to all numbers entered in the original lists, making no modification whatever in the case of the thickly wooded *varkas* numbers."

39. Although the rules clearly stated that "the main principle to be kept in view was that Government should withdraw as much as possible from interference with a rayat's holding," and that "whenever the rights of Government were worth disposing of for money, the value should be taken once for all and future interference abandoned," the question whether the rayats should be allowed the after-shoots and future growth of teak appears to have been raised from time to time.

40. On 7th May 1868 (No. 475) the Officiating Conservator, Mr. Shuttleworth, inquired whether any further interference on the part of Government was necessary when a rayat's field had been once cleared of teak and blackwood by the Forest Department, stating that if the rayats chose to preserve the shoots they would be able to grow for their own use and sale the poles that would spring from the roots of the felled trees, and giving it as his opinion that once Government had felled the original growth they had no claim to the second growth.

41. On 1st June 1868, in reporting to Government on the progress made in the disposal of reserved trees in occupied lands, the Collector remarked that he thought it would be impolitic for Government to claim any fresh teak and blackwood, and that Government Resolution No. 2291 of 18th June 1864, by which they waived their claim to the second growth which might spring up from the old roots and stumps of teak and blackwood felled at the Survey Settlement should be made applicable to the Thána Collectorate. The recommendation was approved by Government in their Resolution No. 2505, dated 1st July 1868.

Enforcement of the rules in the different parts of the district.

42. We will now briefly notice how far the different provisions of the Ellis Rules were enforced in the several *tálukás*. The Government lien on the fruit trees appears to have been disposed of everywhere. The *injáili* trees became the exclusive property of the rayats everywhere except in Kolvan, Dahánu, Karjat[1] and Panvel, where special arrangements prevailed. There is nothing to show that anything was charged for the transfer of this right, although in an expanded vernacular version of the rules received from Mr. Ellis in January 1863 it was provided that where the junglewood was valuable the Collector should decide whether to sell it or give it up *gratis*. No accurate and complete lists have yet been drawn up and no record has been made in the survey registers (except in Salsette, Bassein, Máhim and Bhivandi) as to the disposal of teak and other reserved trees under the rules. We are, therefore, unable to say to what exact extent the Government right to the royalty trees has actually been disposed of, but there is no doubt that it has been more or less parted with in hundreds of villages. We find from Mr. Mulock's Précis of correspondence on this subject that about 103,840 trees in 150 villages of Kalyán were sold for Rs. 16,000, but that the actual number fraudulently parted with was probably double the number given. In Salsette Mr. Bell seems to have carried out the disposal of trees, the proceeds (Rs. 11,000) being credited to Local Funds under Government Resolution No. 4254, dated 27th November 1863. The First Assistant Collector reported to the Collector in 1863 that the matter would be attended to at the *jamábandi* of Kalyán, Murbád and Nasrápur[2] (Karjat). The Collector reported at the end of 1864 that the proceeds of the disposal of Government right during the previous year had been Rs. 5,360. As remarked above the rules were brought into effect in Máhim by the Survey officers concurrently with the Survey. That they were introduced in Bhivandi appears from Colonel Francis' No. 429 of 1866 at page 425 of Volume XCVI. of the

[1] Later on when the *varkas* in Karjat was measured and allotted to the people Colonel Francis applied Joint Rule X. with modification to the assigned lands in the same way as in the case of rice and garden lands.

[2] It does not appear that trees were sold to occupants in Murbád and Nasrápur *tálukás* except in a few isolated cases.

Government Selections, and also from the *mámlatdár's* evidence (Witness No. 26, page 59 of Volume II.). Vigorous attempts appear to have been made to sell the teak and blackwood trees between 1863 and 1866. About this latter date, however, it was discovered that serious frauds had occurred in the Kalyán *táluka* in the disposal of the royalty trees. Thereupon the District Deputy Collector in charge of the *táluka* at once put a stop to the sales, and it appears the work in other *tálukás* was also discontinued,* probably in consequence of the discovery of the Kalyán frauds. Between 1867 and 1870 in some few cases the value of excess trees excluded from the original enumeration was realized by the Forest Department to whom the duty of enumerating trees in occupied numbers was transferred by Government Resolution No. 4172, dated 14th November 1866. The Survey Department was also directed to do the same with regard to the parts of the district which were then being surveyed. The records show that there was a great deal of correspondence at this time between the Revenue and the Forest Department as to the prices to be charged, and the expediency of disposing of the trees by auction sale or by cutting. The cardinal principle of the Ellis Rules of getting rid once for all of the right of Government to the reserved trees in occupied lands by receiving the value of the *estimated* number of trees standing in such lands, and thus avoiding for the future all interference with the occupants thereof, appears to have been lost sight of. It was taken for granted that what was sold to the rayats under the rules was not the whole right to the tree-growth in his number as clearly intended, but only the particular trees which had been valued and paid for. Thus when a record was made in the village registers of such sales in Máhim and Bassein, the entry, instead of being as it should have been that all rights of Government in tree-growth in the number were disposed of, was that "the person named had bought so many teak trees for so much" (*see* Exhibit No. 90, page 176, Volume II.) The Forest Department also attempted to sell the excess trees in occupied lands in Kalyán on the ground, not only that trees had been fraudulently excluded from valuation, but that the contract of the original sale did not include any trees excluded from valuation from whatever cause. The people, however, resisted the action of the Forest Department by not bidding at the sales, &c. At last one Malang Imám filed a suit against the Collector which was decided adversely to Government. In this case the District Judge, whose finding was confirmed on special appeal by the High Court, observed that "what plaintiff's vendors purchased (from Government) was not a right to a specific number of trees but to all the trees on Survey No. 96 estimated, perhaps erroneously, by the defendant's officers at 125 in number." Further on the Judge remarked that "the defendant cannot plead the carelessness of his own officers or indeed their venality in the absence of any evidence connecting the plaintiff's vendors with such venality." Thereupon the Conservator in a memorandum No. 1823, dated 9th December 1870, directed that as the teak case had been decided against Government all teak similarly situated became the property of the occupant and that therefore no action should be taken regarding further disposal of these excess trees.

* *Vide* Collector's Maráthi Circular Nos. 20 and 24 of 24th and 30th August 1866.

43. In 1870 the Collector of Thána issued a notice[1] offering the trees in occupied lands not previously disposed of to the people at certain specified rates. In the 2nd paragraph of the proclamation it was stated that "those who would agree to buy trees at the fixed rates were to cut the trees at their own expense and after cutting them the price thereof would be charged on measuring them." It was further ordered (paragraph 3) that the trees were not to be sold standing. The rayats were allowed three months to make up their minds and were informed that if they did not agree to buy the trees within that time, Government would have them cut at their own expense and sell the same by auction. These orders were unfortunate as they offered a direct incentive to occupants, not merely to purchase the trees in their lands, but to *cut* them. The policy of the Ellis Rules which in no way forced occupants to cut the trees in their holdings, but gave full liberty to the purchasers to preserve them and use them to their best advantage seems to have been again lost sight of.

[1] Exhibit No. 175 of the Memorial to the Viceroy, *vide* Vol IV., page 207.

44. It is also unfortunate that these orders should have been extended to the Dahánu and Kolvan *tálukás* in which teak and blackwood trees had been reserved along with the whole of the tree-growth at the Survey Settlement and up to then specially excepted from the operation of the Ellis Rules. Where the *injáili* trees had been made over to the people either at the Survey Settlement or by the Ellis Rules, the disposal of the Government rights in the royalty trees had the desired effect of removing all further interference, but where Government had reserved all trees in occupied lands, as in Kolvan and Dahánu, the selling of teak and blackwood trees alone has naturally complicated matters very considerably.

45. The disposal of trees under the proclamation of 1870 was carried out by Mr. Campbell. Although three months were originally allowed within which to purchase, all applications to purchase on fair terms seem to have been admitted up to March 1873. As far as can be gathered the sales were properly effected in every respect, fair prices were obtained, and the after-growth was included in the sale both under the terms of the Collector's notice and the understanding at the time vouched to by Mr. Campbell. The sales were almost entirely confined to the *tálukas* of Dahánu, Váda and Shaháp̄ur and the sums noted below were realized :—

Year.	Dahánu, Váda and Sháhápur.			Other *tálukás*.			Total.		
	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.
1870-71	311	1	0	45	13	11	356	14	11
1871-72	13,552	8	9	14	2	3	13,566	11	0
1872-73	20,402	14	9	988	14	6	21,391	13	3
Total ...	34,266	8	6	1,048	14	8	35,315	7	2

46. The disclosure of the Kalyán frauds in 1866 and the incorrectness of the returns in Salsette, Bassein and Máhim had bitterly shaken the confidence of the local officers in the working of the Ellis Rules, and the subsequent experience of five or six years showed them that the practical effect of the policy of vesting the rayats with absolute property in trees was quite the reverse of what was intended. With the development of the railway communications in the district and the ever increasing demand from the town of Bombay, the price of wood of all kinds rose rapidly, and the trees which were scarcely a marketable commodity in 1862, became a valuable property in the hands of impecunious rayats, and as there were no restrictions against export, reckless destruction of timber was the inevitable result. In justice to the people it must, however, be stated that the careless manner in which the rules were carried out by Government officers must have conduced to this untoward result to some extent. The re-assessment of the excess trees and their sale by public auction was naturally considered a breach of contract. As stated above the entire right of Government to the tree-growth was parted with by receiving a certain value which was based on the estimated number of standing trees. When the rayats found that Government asserted their right to the excess trees, they probably thought that the best thing to do with a tree was to cut it down before it was claimed by Government. Another mistaken idea that the object of the rules was not only, as shown by local orders issued from time to time, to get rid of the Government right, but also to get rid of the trees themselves, must have caused a great deal of mischief. Be that as it may, it was felt that the results attained by the enforcement of the rules were not satisfactory. Mr. Campbell pointed out the anomaly of their application to lands where special settlements had been made. He argued that the Government Resolution No. 2291 of 18th June 1864, which was extended to the Thána District by Government Resolution No. 2505 of 1st July 1868, applied to districts where all inferior trees had been given to the occupants and teak and blackwood had been cleared away. He recommended that the

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cutting of teak by Government should stop, and that no more sales to occupants should be permitted. In order to give effect to his recommendation he proposed that Government Resolution No. 2505 should be withdrawn or at least declared not applicable to lands in Váda, Sháhápur, &c. The Collector (No. 2201 of 7th June 1873) argued that "according to page 174 (Revenue Hand Book) it was where Government, *at the Survey Settlement* have felled all the teak and blackwood in a rayat's field, there shall be no interference and Government have no claim to the second growth which may spring up from the old roots or stumps. Government not having felled at the Survey Settlement the rule did not apply and Government was entitled to the after-growth." The Collector evidently ignored the fact that the Government Resolution he was quoting from was, on the application of the Collector of Thána, specially applied to sales under the Ellis Rules in 1868.

Withdrawal of the Ellis Rules.

47. Government passed their orders on these papers in Resolution No. 5040, dated 8th September 1873. They observed that "the object that Government had in divesting themselves of the rights to trees in Thána had not been attained and the rayats instead of prudently utilizing the concession had recklessly destroyed timber-producing trees. That in the earlier settled *tálukás* Government unfortunately abandoned all rights to trees in occupied lands excepting teak and blackwood. Subsequently these were sold and Government in these cases, having parted with their rights, cannot interfere. There are many cases in which the offer to purchase was not accepted and it should be withdrawn. In Dahánu, Shahápur and Váda an anomaly had sprung up, the rayats having teak and Government inferior trees. The offer was here also to be withdrawn and the after-growth re-purchased." This Resolution which cancelled all previous orders was to be extensively published.

48. It appears that nothing was done to re-purchase the after-growth of teak and blackwood in Dahánu and Kolvan. We find that on 14th October 1875 the Deputy Conservator recommended the re-purchase of the after-growth only in numbers included in forests.

49. In forwarding the Government Resolution No. 5040 of 1873 the Commissioner instructed the Collector that entries of the sales of teak should be made in the village registers and signed by the Assistant Collectors. In the course of some correspondence which took place between the Assistant Collector and the Collector on the subject of these entries the Collector ordered that the entries should show the number sold in each field and the balance remaining as Government trees, again ignoring the fact that the entire rights of Government to the teak growth in the number had been disposed of, and that no balance could consequently remain as Government property. In 1876 the Deputy Conservator suggested that though interference in rayats' holdings who had purchased teak was illegal rayats should nevertheless be required to give notice of cutting. In the same year the Conservator asked Government whether he could sell to occupants wishing to purchase teak in their fields. Government directed (No. 4462 of 3rd August 1876) that an *indmdár* might be allowed to purchase, but that no action was to be taken regarding teak on Government land.

Conservator proposes cancellation of the orders of 1868 renouncing claim to the after-growth.

50. In 1878 the Conservator of Forests suggested that the Government Resolution No. 2505 of 1st July 1868 renouncing claim to the after-growth from old shoots when the original crops of teak and blackwood had been felled should be cancelled, and that Government should not dispossess itself of its rights over second growth.

51. Mr. Erskine, who was Commissioner, N. D., at the time, stated that the rule had been in force 14 years and that he could not see how it could be altered without confusion, as in many cases teak had been sold to occupants. He proposed to note in the village registers where Government rights to teak had been parted with, and that no teak on occupied land should, in future, be disposed of to occupants but be preserved as Government property. Upon this Government (No. 3480 of 10th July 1878) held that it was too late to revoke the orders of 1864 and 1868, and directed that the Commissioner's suggestion should be acted on. About this time disputes had arisen as to the ownership of trees in occupied lands in Kalyán which were only partially paid for, in consequence of the sudden stoppage of sales in 1866 by the then District Deputy Collector. The Commissioner suggested that a formal inquiry should be made by an Assistant Collector and the District Forest Officer into the rights of in-

dividuals. The suggestion was approved by Government (Government Resolution No. 2222, dated 30th April 1878), but the Collector was asked to consider the necessity of applying Chapter IV. of the new Forest Act to the forests in occupied lands and *varkas* generally of the Thána District. In 1882 the Commissioner submitted a further correspondence on the same subject for the orders of Government who passed detailed orders in their Resolution No. 3701, dated 14th May 1883. In this document Government observed "that it was useless now to attempt to remedy the error which has been committed. What was done was done and it was now too late to alter it. The results of that error must be accepted. All that appeared practicable was to minimize them as far as possible and not to repeat the mistake." With reference to a proposal made by the Collector "to declare that purchasers of trees have no right to the after-growth," "it seemed clear to Government that it could not be adopted in the case of sales which had already been made, and which must be governed by the rules then in force, nor could it be followed in the case of the sales concluded in 1870 when the right to the after-growth was expressly parted with by Government. The condition mentioned in the proposal should, however, be insisted upon in any sales which might hereafter be effected in the Konkan." Government also directed an inquiry to be instituted to ascertain exactly what trees had been sold in Thána. This inquiry was taken up by Mr. Atkins, whose exhaustive report contains a full account of the disposal of royalty trees in Kalyán under the Ellis Rules. Government have accepted (Government Resolution No. 8658, dated 3rd November 1884) the recommendations made by this officer and at last the vexed question of what trees in Kalyán were parted with under the Ellis Rule is in a fair way of settlement.

52. Before we leave the subject of these rules it is necessary to draw attention to one point which does not appear to have been raised before. It is stated in Mr. Ebden's memorandum "that the nature of the Ellis Rules was such as to necessitate separate inquiry into and disposal of each individual case coming under them, and that therefore no one can claim any advantage derivable from them unless he can show that the case of the trees in his land was dealt with and disposed of under them by a special order applicable thereto." This is perfectly true of the mature* trees that stood in the occupied lands in 1862, when the rules were made applicable, but the question is whether once all the mature trees in the village were counted and disposed of, *all* future interference with the tree-growth in the occupied lands of the said village ceased or not. Government Resolution No. 3412, dated 18th September 1868, would suggest an answer in the affirmative. To state the case more clearly let us suppose that in a certain village with 10 occupied survey numbers, there were mature trees of the reserved kinds in 4 numbers when the lists of such trees were drawn up under the Ellis Rules. The object of the rules being clearly to get rid of the Government interference by disposing of the property in occupied holdings once for all, is it to be held that on the disposal of the standing trees in the 4 numbers which contained tree-growth at the time of the valuation all further interference with regard to all the lands of the village has ceased—in other words should the teak trees which have grown up in the remaining 6 numbers since the application of the Ellis Rules in that village be considered the property of the rayats or Government? The decision of the question will have a practical bearing from a financial point of view in carrying out the scheme recommended by us in the sequel of this Chapter as regards the disposal of Government rights to trees in occupied lands.

* Above 9 inches in girth, all below that size were left out of calculation.

Question whether the sale at any given time of all mature trees then found in a village barred all future interference.

53. The various regulations described above were purely executive orders of Government. For a long time after the introduction of the survey system in this Presidency, all the operations incidental thereto, both previous and subsequent to the introduction of settlements, were carried out under the authority of such orders. Even the celebrated Joint Rules had no higher sanction. But with the progress of the general administration it was found necessary in 1865 to support executive action in survey matters by formal legal authority. Since then the legislation and consequent rules on the subject have undergone many changes. As these enactments and rules deal also with the rights of the people in the tree-growth on their lands, it is necessary to notice them here.

Acts and rules dealing with the rights of the people in the tree-growth in their lands.

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54. Section XL. of Bombay Act I. of 1865 which applied to the whole Presidency, provided that in future the permission to occupy waste land shall include the concession of the right of Government to all trees growing on that land which are not then specially reserved.

Thus unless *specially* reserved all lands which have come under occupation in Thána since the passing of Bombay Act I. of 1865 are absolutely free from interference as regards trees. It may be remarked that this was but a continuation of the policy of the Joint and Ellis Rules.

55. Section XXVIII. of this Act empowered the Governor in Council, from time to time, to lay down rules for the administration of the Survey Settlements. On 5th February 1869 (No. 496) the Governor in Council published a set of rules under this provision. They were in supersession of, but not materially differing from, the old "Joint Rules." There is nothing to show that these rules did not apply to Thána. It is therefore doubtful whether the Ellis Rules which regulated the administration of Survey Settlements in Thána were superseded by these new rules. Rule III. which deals with the subject of trees in occupied lands runs as follows:—

The survey tenure includes the right in all trees standing in occupied lands, subject to the following exceptions:—

(i). * * (about road-side trees).

(ii). Teak, blackwood, sandalwood and such other trees as may be reserved at the settlement, except those specially assigned to the occupant or purchased by him.

56. An amended and enlarged edition of the rules was put forth in 1877. Of those rules, Nos. 3, 4 and 5 bear on the subject. They are as follows:—

(3). The extent to which the right of Government to trees is conceded under Section 40 of the Act will be specified in the notification issued under Rule I. The said concession will ordinarily extend to all trees except the following:—

(i). All road-side trees planted by or under the orders of Government;

(ii). Teak, blackwood and sandalwood;

(iii). Trees the produce of which has hitherto been disposed of by Government;

(iv). Trees in groves, round temples, other than teak, blackwood or sandalwood. } which may be recorded in the settlement records as specially excepted at the settlement.

The right to trees of any of the above classes which have already been specially assigned to the occupant or purchased by him, or to trees standing in public places, will not be affected by this rule or by the notification issued under Rule I.

(4). Nothing in the last rule shall prevent Government from specially reserving their rights to all trees, or to trees of other kinds than those therein enumerated, whenever it may be deemed expedient.

(5). Of the trees to which the rights of Government are reserved, such numbers or kinds as Government may direct will be at the disposal of the Forest Department. Lists shall be kept of all occupied numbers, over the trees in which that Department has any control or lien; the clearing of these numbers by the Forest Department shall be arranged with the Collector and every number when cleared shall be recorded as exempt from all interference in future of the Forest Department.

All reserved trees not placed at the disposal of the Forest Department shall be in charge of the Collector who may dispose of them or of their produce as he may deem fit.

57. It is necessary here to allude to the opinion given by the Remembrancer of Legal Affairs (Exhibit No. 181 of the Viceroy's Memorial, Vol. IV., pages 208-219) on the effect of this legislation on the rights which had already accrued to the people. In paragraph 29 of his report Mr. Naylor writes "this section (40), however, clearly operates only to convey something belonging to Government to the tenant, not to confiscate any right of the occupant to Government. If the occupant was entitled to the trees before the Survey Act was passed, or before the Survey Settlement was introduced, nothing in that Act appears to me to justify its being held that he is no longer entitled to them, or that Government can reserve any of them to itself."

58. In 1879 the Bombay Land Revenue Code was passed. It extends to the whole of the Presidency. Section 40 of this code relates to trees in occupied lands; the first paragraph runs as follows:—

Concession of Government rights to trees in case of settlements completed before the passing of this Act.

In villages or portions of villages of which the original Survey Settlement has been completed before the passing of this Act, the right of Government to all trees reserved by Government, or by any Survey Officer, whether by express order made at, or about the time of such settlement, or under any rule or general order in force at the time of such setttlement, or by notification made and published at, or at any time after such settlement, shall be deemed to have been conceded to the occupant. But in the case of settlement completed before the passing of Bombay Act I. of 1865, this provision shall not apply to teak, blackwood or sandalwood trees. The right of Government to such trees shall not be deemed to have been conceded except by clear and express words to that effect.

59. Most of the settlements in Thána and Kolába were completed before the passing of Bombay Act I of 1865. In the *tálukás* so settled therefore the royalty trees cannot be held to have been conceded "except by clear and express words to that effect." The Legal Remembrancer has lately given his opinion* that No. X. of the old Joint Rules did not concede to occupants the royalty trees "by clear and express terms to that effect" as required by Section 40 of the Land Revenue Code, and that consequently, where the Joint Rules were in force, no such concession can be held to have been made as regards any holding to which the Survey Settlement was applied before the 21st January 1865. We have quoted above Sir G. Wingate's opinion that if any occupant has held his land for a period of 20 years, he has the absolute right of disposing of the whole timber growing on it under Rule X., and that if his occupancy is of more recent origin he has under the same Rule an equally absolute right of property in all trees that have grown up since the land came into his possession. The opinion of the Legal Remembrancer on this point as expressed in paragraph 8 of the report above alluded to (*vide* paragraph 31 above) appears identical with that of Sir G. Wingate. It follows then that either Section 40 of the Land Revenue Code has taken away from occupants rights in trees, which had already vested in them by the operation of the Joint Rules, or any similar rules conceding all trees in general terms without specifying the royalty trees, or else that the Legal Remembrancer's opinion that the royalty trees were not conceded by these rules by clear and express terms within the meaning of Section 40, is incorrect. In their Resolution forwarding the Legal Remembrancer's report for information of the officers concerned, Government have expressed no opinion on this point. It is one however on which a final and authoritative decision is necessary before any satisfactory settlement can be carried out.

*Accompaniment to Government Resolution No. 3998 of 4th June 1886.

60. In 1881 the Local Government published rules under Section 214 of the Land Revenue Code. They applied to Thána in common with the other districts. Rules 91 to 98 treat of the subject of trees in occupied lands. Although the rules deal with the subject more in detail than the old rules did, they are identical with them as regards their scope and intention. The concession to the rayat of the right to the future growth, once the right of Government was disposed of, was distinctly provided for in Rule 98.

61. The Collector of Thána, however, considered that the concessions made by the rules were far too liberal as regards the *varkas* lands of the Konkan districts and proposed that the reserved trees in such lands should be reserved as heretofore and be available for Government cuttings to be made by the Forest Department from time to time. Government accepted the recommendation and in their Notification No. 3928 of 22nd May 1883, promulgated the following additional rule :—

98 A. Nothing in the foregoing rules, Nos. 93 to 98, both inclusive, shall be deemed to apply to *varkas* lands in the districts of Thána, Kolába and Ratnágiri, and *beta* lands in the district of Kánara, or to any unalienated land in the Dindori *táluka* of the Násik District or in any of the villages noted in the margin in the Khed *táluka* of the Poona District.

1 Kuhinde Budruk.
2 Talavde.
3 Avdari.
4 Kude Budruk.
5 Vasheri.
6 Devoshi.
7 Saigaon.
8 Vehetale.
9 Kahu.
10 Kudhadhe.
11 Saburdi.
12 Koyali *tarf* Vade.
13 Darakvade.

In the said lands the trees over which the rights of Government are reserved shall be available for cuttings to be made from time to time by or under the orders of the Forest Department in consultation with the Collector.

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The sale of any such tree, or of the timber thereof will confer no right to the after-growth from the root or stump of the tree so cut. The reservation of the rights of Government over the trees will extend to all such after-growth also.

The above rule can of course only affect trees over which the rights of Government were reserved at the time the rule was made. If the after-growth of trees had already under the operation of previous rules vested in occupants, Rule 98 A does not presumably revoke rights so acquired.

Rights to trees in lands held under superior tenures.

62. As our proposals will relate exclusively to trees in surveyed *khálsa* or Government occupied lands, we need not here discuss the respective rights of Government and occupants to trees in lands held under superior tenures such as the *dhára* lands of the Kolába district and *ináms* and leaseholds in perpetuity. The rights to trees in such lands are governed either by the principles noticed in the first paragraph of the Précis of correspondence supplied to the Commission by Government, or by special recognition in grants, title-deeds, &c. The full proprietary rights of *dhárekaris* to all trees in their holdings have been admitted in the Resolutions of Government noted in the margin. Where an *inámdár* has accepted a Summary Settlement he is the full proprietor of his holding, including teak and all other trees (Government Resolution No. 2232 of the 14th March 1884). The forest rights of the principal proprietors in Salsette and other holders of entire alienated villages and *izáfatdárs* are described at some length in Chapter VII, Part II. of the Thána Gazetteer.

Government Resolution No. 1240 of March 28th, 1868; Government Resolution No. 2095 of May 27th, 1868.

It is necessary to decide what trees still belong to Government and what trees have become the property of occupants.

63. We have given above as complete a resumé as the materials before us have made possible of the orders regulating the rights to trees in Government occupied lands. No attempt has been made by the Memorialists to support their general claims to trees in their holdings by any arguments. They have contented themselves with appending numerous exhibits to their memorials, bearing more or less directly on the questions at issue, and leaving the Commission to draw its own conclusions as to the construction to be placed on all the evidence available. The subject is full of difficulties and intricate legal complications which we also should have been glad to have been able to disregard, were it not that their solution seems to us to be an indispensable preliminary to any final settlement of the question. Before Government can carry out the recommendations we shall have to make as regards the trees in occupied lands, it must be decided once for all what trees under what circumstances still belong to Government in full proprietary right, and what trees have become by purchase, grant or otherwise, the property of occupants.

64. We may safely assume that when *any* royalty trees in a survey number have been sold under the Ellis Rules, all rights to all royalty trees, or their after-growth in such number, have been for ever parted with, whether to the occupants or other purchasers. We may further assume that in all cases where prior to the passing of Government Resolution No. 3480 of 10th July 1878 trees have been felled by or on behalf of Government the after-growth of such trees has already vested in the occupants of the land. On the other hand it is clear that under the terms of the Sanján and Kolvan Settlements Government retain proprietary rights in all trees in occupied *varkas* land unless such rights have been parted with by *sale*.

65. But there are many other cases in which doubts may naturally arise as to whether the existing teak trees are the property of Government or the occupants. The consideration we have already given to the subject enables us to indicate some of these doubtful cases. We do not feel however that we should be justified in giving a definite opinion on the merits of such cases. These are matters which Government will no doubt decide after full consideration and reference if necessary to their responsible legal officers. We mention them here simply because we consider it necessary that clear instructions should be given to the local officers how to deal with such cases in effecting the settlement we have to propose.

66. The chief points for decision appear to be as follows :—

1st. Are the Joint Rules with or without modifications to be held to have been introduced into all the Konkan *tálukás* except Kolvan and Sanján by Colonel Francis?

2nd. If so, was the introduction of such rules contrary to any rule or orders of Government in force at the time?

3rd. If their introduction was not contrary to any such rule or order of Government have they not been legalised *ex post facto* by Section 40 of the Land Revenue Code? If the Joint Rules are thus held to have been legally introduced in any part of the Thána District the question of the proprietary rights to trees in occupied lands in such parts will be governed by Joint Rule X. Further issues then arise as follows:—

4th. Having regard to the provisions of Section 40 of the Land Revenue Code as stated in the margin and the wording of Rule X, how is the term "twenty years" as used in Rule X. to be interpreted? Does it mean simply twenty years *before* the introduction of the Survey Settlement, or twenty years' continuous occupancy completed at any time before or after the introduction of the Survey?

But in the case of settlements completed before the passing of Act I of 1865, this provision shall not apply to teak, blackwood or sandalwood trees. The right of Government to such trees shall not be deemed to have been conceded, except by clear and express words to that effect.

5th. If the latter interpretation is correct, have occupants who have held their land continuously for twenty years acquired under Rule X. full rights in the royalty trees in their holdings?

6th. Have such rights been affected by the provisions of Section 40 of the Land Revenue Code, which lays down that in all settlements effected prior to the passing of Bombay Act I of 1865, no such rights are to be held to have been conceded unless granted "by clear and express terms to that effect"?

Again where Ellis Rules as regards the disposal of teak and blackwood by sale to occupants have been applied instead of the Joint Rules the further issue arises—

7th. In certain villages lists of trees to be disposed of under the Ellis Rules were prepared. Certain lands in these villages were omitted from the lists, presumably because they contained either no royalty trees at all, or only trees of too small size to be included in the valuation. In such cases are the Ellis Rules to be held to have been applied to the entire village, or only to those survey numbers the standing trees in which were actually valued and sold? In other words do the trees which may have grown up since the application of the rules in survey numbers in which no trees were valued and sold, now belong to Government or to the occupants?

67. When all doubts on the points above suggested have been set at rest, the way will be cleared for the disposal of all rights which Government still retain in trees of the reserved kinds in whatever manner may seem best. The reserved trees in occupied lands in Thána consist of—

Recommendations as to the disposal of reserved trees over which Government still retain full proprietary rights.

1st. The royalty trees, *viz*: (1) teak, (2) blackwood, and (3) sandalwood, which have been reserved, except where sold under the Ellis Rules or otherwise conceded or parted with, in all the occupied lands in the district, and of (4) *tivás* (Ougeinia dalbergioides) which has been reserved only in the Sanján and Kolvan villages.

2nd. All trees other than the above in the Sanján and Kolvan villages, Government having reserved proprietary rights, while conceding to occupants the privilege of cutting all such trees for domestic and agricultural purposes.

Except in Sanján and Kolvan no trees but the three royalty trees abovementioned, are in any way reserved. We will first consider what steps should be taken as regards the royalty trees wherever situated, over which Government still retains full rights, and will then make proposals as regards the specially reserved trees in the Kolvan and Sanján tracts.

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68. The teak growth in occupied lands throughout the district is plentiful and constitutes a very valuable property. The *tivas* where found is also a valuable tree, in great demand for ploughs, but it grows only in the northern parts of Thána. Blackwood is, we believe, found sparingly throughout the district, but nowhere to the same extent as teak. Sandalwood has in accordance with usual custom been included in the list of Royalty trees in the Thána settlements, but is so rarely found as to be scarcely worth taking into consideration. Whatever settlement, however, is applied to the reserved teak trees, should apply equally to all the other royalty trees wherever found in occupied lands.

Disposal of royalty trees in occupied *varkas*

69. At present the position of Government as regards many of the trees which have grown up since the partial application of the Ellis Rules, is, as will be seen from the resumè of orders above given, by no means clear, and any final settlement now carried out must to some extent be complicated by the fact that in some *tálukás* trees have already been unreservedly sold to occupants under those rules. On the one hand it is clearly desirable, and in accordance with the principle of the Survey Settlement that there should be as little interference as possible with the full and unrestricted enjoyment by every occupant of the land included in his holding. An occupant cannot be said to have a full enjoyment of his land, if it is covered with trees, which he may neither cut for his own use, nor lop for ash manure. On the other hand the special conditions of cultivation in Thána make it very necessary that the tree-growth in occupied *varkas* lands, whether reserved or not, should be jealously protected, both in the interests of the occupants themselves and of the State forests, which must otherwise supply the deficiency. The injury already caused by the unconditional surrender of all unreserved trees throughout the greater part of the district has undoubtedly been serious, and we should hesitate to recommend any similar unconditional disposal of the valuable tree property in the Kolvan, Dahánu and other *tálukás*, over which Government still retains proprietary rights.

70. In the course of our preliminary discussions of this subject, we were inclined to think that the best course would be to dispose of the trees by sale to occupants at half price, with a condition that the trees may not be cut for sale without previous permission; and in the event of the refusal of the occupant to buy on the terms offered, to get rid of all rights of Government in the trees either by auction sale to the highest bidder or by departmental cutting, the trees in either case to be removed from the land within two years, and the after-shoots and saplings excluded from valuation to be made over to the occupant on his binding himself not to cut for sale without permission.

71. A rough scheme on the above lines was submitted for the opinion of the officers mentioned in Chapter I., paragraph 34, who were also asked to state whether the proposed measure would not in their opinion do away in a great degree with the necessity of making provision on specially favourable terms for supplying wood for domestic and agricultural purposes. This proposal and the opinions recorded thereon will be found in Volume II., pages 316 to 321. Messrs. Mulock and Atkins, as will be seen, deprecate the surrender of the royalty trees on any terms. Mr. Sinclair on the other hand, writing with reference to the Kolába district only, where the reserved trees are few in number and of small value, would give them up unconditionally. Messrs. Mackenzie, Keyser and Shuttleworth are agreed that the wisest course will be to make the trees over to occupants on conditions, which while ensuring free use for agricultural and domestic purposes will preclude their sale without permission. Messrs. Ebden and Loch, following the existing Kolvan and Dahánu system, would impose a still stricter condition, *viz.*, that the trees shall not be sold at all, but be kept exclusively for the occupants' own individual wants. It is to be observed however that Mr. Ebden does not contemplate recovering any part of the value of the trees from occupants. The Thána Association has also in answering the same question expressed its approval of the proposal as sound and practical.

Recommendations.

72. A further consideration of the subject has led us to think that the object in view will best be met by sale of the trees to occupants under the simple condition that the material either in the form of timber or firewood shall

not be exported beyond the limits of the district. A condition precluding sale absolutely would, we think, cause unnecessary inconvenience both to the occupants themselves and the local population generally. It is better also if it can be avoided, to impose no condition requiring permission before felling for local sale. The inquiries in such applications, which are needed to satisfy the authority giving permission that the applicant has surplus material after providing his own and his tenants' wants, which he may properly dispose of, must necessarily be entrusted to subordinates. Permission may be improperly given, or unnecessarily refused and dissatisfaction and delay may ensue. We think therefore that there should be no interference with occupants as to the disposal of the trees when once made over to them beyond strict prevention of export from the district.

73. An unconditional surrender of royalty trees would result, as the most intelligent of the Memorialists and witnesses themselves admit, in wholesale fellings for export to Bombay. The difficulties in the way of providing a permanent source of local supply independent of Government forests would thus be greatly aggravated. On the other hand these difficulties may be considerably lessened and the present drain on the forests greatly lightened, if the trees are made over to occupants under a condition which will ensure their utilisation for local as distinguished from trade demands. We believe this object can be effectually secured by prevention of export.

74. The measure we propose will, no doubt, result in an immediate glut of the local market, and a consequent fall in the local price of timber. A local trade, to meet the local, which will then be the only, demand for this timber will be speedily developed; but the demand will soon reach its natural limits, and temptation to wholesale denudation to meet the export demand will be removed. Thus the chief object to be kept in view, *viz.*, the avoidance of all petty interference with an occupant's user of his land or the trees growing thereon, and the increase and permanent preservation of a substantial source of private local supply of wood for building and agricultural purposes, and also in some degree for fuel and *ráb* materials, will be gained.

Advantages of the plan proposed. Substitution of more durable material for house building and farm implements.

75. Another great and very important advantage of making the produce of these reserved trees available for the cultivators' ordinary wants under restrictions, which will practically prevent its being diverted to other uses, is that the local population will thus obtain far better and more lasting material for their houses and farm implements than they now do. It is obvious that the utilisation of the now reserved trees for these purposes will to a very considerable extent lessen the demand for junglewood from the forests. But the drain on the forests will not only be lightened in proportion to the annual yield of the reserved trees. It will be still further lightened because teak will last much longer than junglewood. We fully concur with Mr. Ebden's remarks on this point (printed in Volume II., pages 311 to 312). He writes:—

"One great cause of a constant drain on the forests is that, as a rule, none but inferior kinds of wood are conceded for agricultural use. The *mándav*, hut or plough made of these rapidly decays, or is worn out and has to be replaced. While had the best wood available been used it would have lasted thrice, ten or twenty times the term. To put it briefly, the better the material taken from a forest, the longer interval of rest will the forest enjoy before new material is required to be drawn from it. From other points of view also I consider that the policy of granting good wood is sound. The inferior trees have many of them their economic uses for which they ought to be reserved, and as far as climatic influence and reboisement are concerned, their presence in a forest is quite as valuable as that of superior kinds. For practical purposes I imagine that the existence of blackwood and sandalwood in occupied lands in Thána may be ignored, and that the teak alone needs consideration. The value of the teakwood standing in such lands is of course very large, and the annual revenue derived from this source is perhaps considerable. It is the most valuable of all woods for the general purposes of an agricultural homestead, and notwithstanding all restrictions, the temptation to appropriate it to those purposes is frequently yielded to. One great point about the tree is that it is practically indestructible; the new shoots that rise from the old stock rapidly form trees once more if properly cared for. Its leaves also are of great value locally for roofing houses and for lining rice bins, and very great discontent was

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caused by restrictions placed on their use. If a supply of wood of this kind is placed at the disposal of the rayat, and if he is granted leave to grow this wood on his own lands without fear of its appropriation by Government, I think that there is no doubt that an infinite boon would be conferred upon him, and that the popularity of the resumptive measure (*i.e.* the plan suggested in General Question No. 1 that rights in all trees parted with at the Survey should be resumed by legislative Act and re-conveyed to occupants subject to conditions precluding sale without permission) would be almost ensured. And at the same time a sensible relief would be effected to the drain on the forests."

The settlement recommended is made on the understanding that the Forest Act will be amended so as to bring under control the removal of the produce from private holdings as well as forests

76. It must, however, be distinctly understood that we make this proposal that the royalty trees should be made over to occupants under conditions precluding export, on the assumption that the Forest Act will be amended, as we shall propose elsewhere, so as to bring the removal of forest produce from private holdings under control. The chief and only difficulty in enforcing the proposed restriction on export lies in the fact that the full rights of Government in similar trees have in many parts been already alienated. So long as no passes are required to cover the forest produce from private holdings while in transit, this difficulty is insuperable, and would be fatal to the scheme now proposed. But if *all* timber from occupied land is subject to the rules for timber in transit under Section 41 of the Forest Act; if special passes are issued to cover the timber of those who have full right to export it; and if the provisions of the Act requiring the use of a property mark are enforced, there need be no great difficulty in distinguishing the timber which may be exported from that which under the special conditions of its disposal may not be exported.

Enumeration and valuation of existing trees.

77. We propose therefore that all royalty trees over nine inches in girth now standing in what are classed as *varkas* lands, and over which Government still retains full proprietary right should be as soon as possible enumerated and valued. As soon as the necessary counting and valuation has been completed in any village the results should be published in that village, and the occupants invited to purchase all rights which Government now possess in those trees, save and except the right of exporting the produce of the existing trees, or any trees which may hereafter grow in their place, either in the form of timber or firewood. This settlement should, we think, be applied to the tracts coming under the Kolvan-Sanján Settlements as well as all other parts of the Thána district. The prohibition of export however may not alone be sufficient to prevent occupants from clearing for cultivation lands now covered with a thick growth of teak. It would be a serious loss to the rayats if such lands were permanently denuded, for they either are, or form the nucleus, of the best *shindád* lands in the district. To prevent such an untoward result, we would propose that if the land in which the royalty trees are reserved to Government has not been cultivated within the last 10 years on account of the tree-growth, an additional condition shall be imposed to the effect that it shall not be cleared for future cultivation, but be kept permanently as *shindád* land and properly demarcated. In the sequel of this chapter (*vide* paragraphs 123 to 131), we have dwelt at length on the desirability of encouraging cultivators to set apart suitable portions of their *varkas* lands for *shindád*. We have proposed that whenever occupants shall voluntarily set apart any portion of their *varkas* as permanent *shindád*, and agree not to export or sell for export grass or trees growing in such lands, they shall be granted an annual remission equal to three-fourths of the assessment of such lands. The effect of our proposal will be that the permanent retention for *shindád* purposes of the old teak-covered lands on the terms above described, will be secured.

To avoid the possibility of any legal complications ensuing hereafter, it will be advisable that the form or forms of agreement or contract most suitable for the purposes intended should be drafted by the Remembrancer of Legal Affairs.

78. We have next to consider how the enumeration of the trees belonging to Government should be effected. Our inquiries lead us to believe that it will prove a very laborious and troublesome task in the present state of the *varkas* measurements. The marking off of *varkas* areas was, as is well known, very roughly accomplished at the original Survey, the holdings of several occupants

being grouped into one big number; and very frequently the actual possession of the individuals does not now correspond with the record of the holdings in the survey papers. Under these circumstances a complete and satisfactory enumeration will only be possible where all the co-occupants of a number agree among themselves as to their respective boundaries, but in cases of dispute a complete demarcation of the subordinate shares or *phálnis* will be a necessary preliminary to proceeding with the enumeration of the trees. Such a complete measurement of the subordinate shares is now being made as a part of the revision survey operations, although the measurements so recorded are not shown by actual field boundary marks. We would suggest that advantage might be taken of this survey to facilitate the work of enumeration of reserved trees in each sub-share. The survey subordinates, in all future operations, should be required to record the number of teak trees in each *phálni* number and whether the land has ever been under cultivation within 10 years. As soon as the measurement work is completed, and with the help of the survey record, and if necessary a small staff of survey subordinates, the *final* enumeration of the trees should be carried out by superior officers of the Forest Department deputed from other districts at slack times of the year. They should also at the same time select the lands which on account of the thick growth of teak therein should permanently be retained as *shindád* as a condition of the sale.

Price to be paid by occupants.

79. As regards the price which should be paid by occupants, the valuation should be fixed with due regard to all local circumstances by the Forest officers in consultation with the Collector. In consideration of the restriction on export, and the consequent lowering of the value of the trees, we think it is only fair that a considerable reduction in the market price should be made. We would recommend that the price to be charged to occupants should be one-half of the present market value: We take into consideration the fact that the after-growth of the trees will also vest in occupants subject to the condition respecting export. As it is clearly desirable that this plan of disposing of the royalty trees, if adopted at all, should be generally followed throughout the district, and as its acceptance or refusal must depend on the will of occupants, the terms of sale must be sufficiently liberal to leave no doubts in their minds as to the wisdom of accepting them.

Payment of price of trees by instalments.

80. The sale of the trees under the above proposal will entail the recovery of considerable sums of money from persons who have ordinarily very little cash at their disposal without recourse to money-lenders. To avoid driving occupants to borrow money at high interest, or to cut recklessly without regard to personal wants or local demand, so as to realise the value of the property at once, we would allow payment for the trees to be made by easy instalments. All sums under Rs. 25 should, we think, be paid at once and all dues recovered within 6 years. Sums exceeding Rs. 25 should be paid in half-yearly instalments of not less than Rs. 15 and subject to the 6 years' limit. The rules regarding discount on prepayment of land revenue should be held equally applicable to payments for trees. We do not think it is necessary to stipulate that no fellings shall take place until the full purchase-money is recovered, or that fellings shall only take place from time to time in proportion to the amount recovered. The price of the trees will always be recoverable from the occupant as a revenue demand, and the land will ordinarily be a sufficient security in the last resort. Should this, in exceptional cases, be considered insufficient, the further precaution of requiring security bonds backed by solvent and well-to-do persons, can be easily taken at the same time that the agreements for purchase of the trees are executed.

On completion of sales entries to be made in village registers.

81. On completion of the sale contracts entries should be made in the village registers opposite each of the survey numbers concerned, in accordance with the rules in the revised manual of village accounts, giving the necessary details and distinctly recording the condition under which the present and future growth of the trees of the reserved kinds has been made over to the occupants.

Procedure recommended

82. We have futher to consider the course to be followed should any occupant fail to accept the terms offered. When the valuation lists of reserved

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trees are published in a village, the occupants concerned should be informed that the terms therein offered will hold good for one whole year from date of publication, and that their acceptance of the terms may be signified at any time within that period. They should, however, be made to understand that the time will not under any circumstances be extended. This will allow ample time for consideration, and making all necessary arrangements. If an occupant fails to signify his acceptance of the terms within the year allowed, it will, of course, be open to Government to dispose of the trees in any way they please.

should occupants refuse the terms offered.

83. As however the chief aim of our proposals is that these reserved trees should be preserved as a permanent source of private local supply, and to avoid wherever possible, all unnecessary destruction, we would still allow the occupant to purchase the trees, if so disposed, at their *full* value, at any time before they are felled on behalf of Government, or sold by auction, subject to the same condition respecting export. As again it is desirable, whether occupants assist in the matter or not, that the reserved tree-growth in occupied lands should be available for the occupants' own use, we would, wherever the trees have once been cleared, give them the after-growth in the same way as if they had purchased the trees, subject only to the condition that the produce shall not be exported.

84. We do not think it desirable to fix any limit within which the trees should be cut and removed by Government in the event of an occupant's failure to accept the terms offered. In such cases, if they should occur, there seems no good reason why the trees should be felled before they have reached maturity. If an occupant is anxious that all interference with the trees in his land shall cease he can attain this end at once by accepting the liberal terms offered. If he fails to take advantage of the offer no special consideration for his interests requires that Government shall forego realising the full value of their property at any time most convenient to them.

85. Mr. Ebden has suggested that the purchase of the royalty trees should, if required at all, be made obligatory and that failure to purchase should involve forfeiture of occupancy, subject of course to compensation. We see no sufficient reason for this provision and believe that the terms proposed will meet the general approval of all concerned.

Recommendation as regards reserved trees in rice, garden and *rabi* lands.

86. It will be observed that our proposals for the disposal of royalty trees by *sale* to occupants refer only to trees standing in lands which are now classed as *varkas*. The number of reserved trees standing in garden, rice and *rabi* lands and the strips of land attached to them called *pot varkas* is, we believe, very insignificant. These were the lands which were anterior to the Survey held in hereditary occupancy as distinguished from the *varkas* or upland which was common waste or forest land. From the history of the various orders passed by Government from time to time regarding teak trees which we have summarised above, it is by no means clear that the reservations ordered in 1841 were subsequently extended to teak trees in hereditary occupancies, as well as trees in waste, forest and *varkas* lands. We offer no opinion on this point as a legal question. But we think taking all the facts into consideration that Government would do well to make over the trees of the reserved kinds in these lands to occupants without exacting any payment. At the same time it is clearly necessary that the user of the trees should be subject to the same restriction respecting export as the trees which will be purchased under the above proposals. It would create endless confusion if an occupant might export timber from one part of his holding, and not from another. We would, therefore, make it a strict condition of the surrender of these trees in garden and rice lands that their produce shall not be exported.

Similar procedure recommended where doubts exist as to whether trees in *varkas* lands now belong to Govern-

87. Similarly as regards *varkas* lands, if owing to the complications which have ensued, doubts should arise in any of the cases mentioned above in paragraph 66 as to whether existing trees sufficiently mature to be included in the proposed valuation, still belong to Government, or have passed, under the operation of the rules applicable to the subject, into the ownership of occupants, and such doubts cannot be satisfactorily decided, we would recommend that advantage should

be taken of the occasion to effect a fair compromise, and to make over the trees to the occupants, without payment, on their agreeing to the proposed condition against export.

ment or occupants under the rules and orders applicable.

Disposal of the reserved trees other than royalty trees in the Kolvan and Sanján villages.

88. The Survey Settlement was introduced between 1864 and 1866 into the Kolvan *táluka* comprising the present *tálukás* of Váda and Shahápur and the petty division of Mokháda, and in 1866-67 into the Sanján *táluka* which includes the present Dahánu *táluka* and some thirty villages of Máhim. By all previous settlements, including that of the Umbargáv petty division of Dahánu *táluka*, the rights to the junglewood growing in occupied lands may now be said to have been conceded to the occupants. Fruit trees also belong to occupants everywhere, such trees of which the produce was formerly received by Government having been already purchased by occupants at a valuation as provided in Government Resolutions Nos. 52 and 535 of 1875. But under the Kolvan Settlement all trees were reserved in all occupied lands, the privilege for use for certain purposes being conceded, but not that of cutting for sale. Similarly under the Sanján Settlement all trees were reserved in occupied *varkas* lands, but the reservation did not in this case extend to junglewood trees situated in rice and garden lands.

89. When these settlements were first introduced occupants were not required to obtain previous permission before cutting junglewood for home and field consumption. As far as we can learn such permission was not made obligatory until 1870. But from that date executive orders were from time to time issued declaring previous permission to be necessary. All previous orders on the subject were superseded by the rules published on the 9th January 1885, under Section 75 (*c*) of the Forest Act and Section 44 of the Land Revenue Code.

Existing rules under Section 75 (*c*) of the Forest Act, and Section 44 of the Land Revenue Code.

90. The rules under the Forest Act provide (1) that "no person who is not entitled under the Survey Settlement to any privilege in respect of any trees belonging to Government, growing in any *varkas* land to which that settlement has been extended" (*i. e.* the royalty trees, *viz.*, teak, blackwood and *tivas*) "shall fell, remove, destroy, lop or in any way injure such trees, except under the order of the Assistant or Deputy Collector in charge of the *táluka* or of the Divisional Forest Officer:" (2) that no person who is entitled to any privilege conceded under the said settlement in respect of any such trees as aforesaid shall—

(*a*) exercise such privilege except in such manner and to such extent as may be allowed by any rule at the time in force prescribed in this behalf by the Collector of Thána under Section 44 of the Bombay Land Revenue Code, 1879;

(*b*) fell, remove, destroy, lop or in any way injure any teak, *tivas* or blackwood tree belonging to Government, growing in any such land as aforesaid, except under the order of the Assistant or Deputy Collector in charge of the *táluka* or of the Divisional Forest Officer.

It is further provided that if an occupant of *varkas* land coming under the Sanján and Kolvan Settlements wishes to clear the land for cultivation, he must first apply for permission to the Assistant or Deputy Collector in charge of the *táluka*, stating the necessary particulars, and that in the event of permission being given the trees when cut shall be at the disposal of the Forest Department.

91. Then follow the rules made by the Collector of Thána under Section 44, Land Revenue Code, regulating the exercise of the privilege of cutting firewood and timber for domestic and agricultural purposes, as conceded under the Survey Settlement. It is declared that the said concession did not extend to teak, *tivas* and blackwood trees, which are called the 'excepted' trees, and that consequently these trees must not be destroyed, lopped or in any way injured (rule 1); that "the concession did not extend to the removal of any tree or any portion of a tree for the purposes of sale or trade, and that persons exercising the privilege must do so only for their own *bonâ fide* domestic or agricultural purposes (rule 2); that "persons exercising the privilege for the purpose of obtaining *ráb* must not cut the leading shoot (*shenda*) of any tree which they

lop for this purpose, nor touch young shoots or seedlings" (rule 3). Rule 4 specifies what an occupant may do in exercise of the privilege without first obtaining permission, provided the wood, &c., is for use within the limits of the same village in which the gathering or cutting is made. He may (1) gather fallen dead wood, and if that is insufficient cut wood from any but the excepted trees for firewood; may (2) cut wood from any but the excepted trees or bamboos for agricultural implements; may (3) cut branches for *ráb* from any but the excepted trees; and may (4) cut thorny bushes or bamboos for hedges.

By rule 5 previous permission is required (1) if the wood is required for building purposes, whether it is to be used within the limits of the same village in which it is cut or not, and also (2) if the wood or other material cut or gathered for any of the purposes mentioned in rule 4 is conveyed to or used in any village other than the one in which it has been so cut and gathered.

By rule 6 Assistant and Deputy Collectors in charge of *tálukás* may give the requisite permission under the preceding rules "(*a*) for cutting wood for building purposes; (*b*) for cutting and removing bamboos to another village for any purpose; (*c*) for gathering or cutting and removing firewood to another village in any quantity exceeding in the aggregate ten cart-loads for any one household during one year;" *mámlátdárs* and *mahálkaris* may give the requisite permission "for (*d*) any other purpose." But all applications may be received and inquired into by *mámlatdárs* and *mahálkaris*, who will, if necessary, obtain the orders thereon of the Assistant or Deputy Collector.

Rule 7 specifies the particulars which must be contained in each application. Rule 8 prescribes the form of the pass when permission is given in any case under rule 5; and rule 9 provides that permission shall not be granted for the cutting or removal of any wood, &c., of an amount which the officer empowered to grant permission deems unnecessarily large, and further requires the said officer to enter in the pass such limit of time as he considers reasonable within which the cutting shall be completed, &c."

92. The leading principles of the Sanján and Kolvan Settlements, under which Government, while reserving proprietary rights in all trees in occupied *varkas* lands, concede to occupants a free user of all but the specially reserved trees for their own *bonâ fide* wants, but not for sale, appear to be essentially sound. Though not strictly in accordance with the general practice observed in the Survey Settlements, the plan thus adopted involved no violent departure from existing usages, and was in every way suited to the special conditions of Konkan agriculture. Experience has shown that the system has on the whole worked well, and that the chief object in view, *viz.*, the maintenance of a permanent supply of wood and *ráb* material in private holdings, for the cultivators' own use, has been in great measure gained. We know both from the evidence and our own observation that while the occupied *varkas* lands in the villages included in these settlements are, as a rule, well covered with trees useful to the cultivator, similar lands in other villages, where no restriction on the sale of the wood has been imposed, are comparatively bare and denuded, and occupants are consequently almost entirely dependent on forests for their fuel and *ráb*. It is a matter for deep regret that the result of the unconditional concession of all but the specially reserved trees in the tracts first settled was not foreseen and that the wiser provisions of the later settlements were not generally applied in all the Konkan *tálukás*.

Complaints against the working of the rules under the Sanjan and Kolvan Settlements.

93. The land-holders however of Dahánu, Sháhápur and Váda naturally chafe at restrictions from which their neighbours of Máhim, Bassein, Murbád, &c., have, by the accidents of revenue administration, been freed, and urge that the distinctions now made are invidious and unfair. The Dahánu and Umbargáv witnesses in particular complain strongly of the delay incidental to the obtaining of permission to cut wood, of capricious refusals of reasonable applications, and of undue severity in the working of the rules, resulting in criminal prosecutions for trifling offences. To elucidate the points above mentioned we may call special attention to the evidence of Thána Witnesses, Nos. 37, 38 and 45 (Volume II., Part I.). Very similar complaints are made by two Sháhápur Wit-

nesses, Nos. 13 and 17 (Volume II., Part I.), but more as regards unnecessary prosecutions for breaches of the rules than delays and refusals in granting applications.

94. Attempts have also been made to show that in some cases serious difficulty has been experienced in obtaining the necessary wood for funeral pyres, and that bodies of deceased Hindus have, in consequence of these difficulties, had to be buried contrary to religious customs instead of being cremated. The evidence connecting such departures from usual custom, if they occurred, with the rules in force as regards the user of trees in occupied lands is certainly not convincing. As no evidence has been given to show that any occupant has ever been punished or subjected to any annoyance for having cut or sold wood from his land for cremation purposes, we cannot but regard this alleged grievance as a purely imaginary one, introduced with the sole object of discrediting a system, which as at present regulated, is otherwise distasteful to the Memorialists.

95. On the strength of the few specific instances of illiberal treatment and perhaps unnecessary severity brought to light by the witnesses above-named, the Thána Association in their reply to the general question as to trees in occupied lands assume (*vide* Volume II., pages 348 to 349) "the inherent capability of such a system being abused," condemn the system accordingly in the strongest possible terms, and urge the "utter impossibility" of its being generally acceptable to the Thána rayats. They further attribute whatever abuses may have crept in, in the working of the rules, "to the fiscal interests of the Forest Department."

96. We do not propose to discuss in detail the various cases adduced to show undue severity in enforcing the restrictions incidental to the system, or to pass any opinion as to whether in certain instances quoted the applications for permission to cut have or have not been refused on good grounds. Occasional mistakes have no doubt been made. But such mistakes have occurred, we think, not because the principle of the system is itself unsound, but rather because the rules requiring permission before cutting have been unnecessarily strict and elaborate. The local officers have at times perhaps been too apt to forget that the reservations of all but the royalty trees in Sanján and Kolvan were made primarily in the interests of the cultivators themselves, for their benefit, in short, and not for revenue purposes. The practice, even though rarely resorted to, of requiring applicants to pay the value of junglewood cut in their occupied lands may have not unnaturally created an impression that the restrictions were imposed more in the interests of the State than the cultivators.

97. We think too that the complaint of undue delay in disposing of applications for permission to cut and remove material is well founded. From returns furnished by the *mámlatdárs* of Dahánu, Sháhápur and Váda, showing the number of such applications received during the past five years, we gather the following details:—In Dahánu out of 347 applications during the period mentioned, 86 took a longer time than 6 months to dispose of; in Umbargáv 45 out of 273 applications, in Shahápur 28 out of 98, in Mokháda 5 out of 15, and in Váda 67 out of 208 were not disposed of within six months. It is noticeable also that applications of this nature have been more frequent in Dahánu and Umbargáv than in Sháhápur and Váda and Mokháda; that no applications were made in Mokháda from 1880-81 to 1882-83; none in Váda in 1880-81 or 1881-82, and only 1 in 1882-83; while in Shahápur also only one such application was made in each of the years 1880-81 and 1881-82. It would seem from this as if the rule requiring previous permission had remained practically a dead letter in these inland tracts until 1883-84.

98. On the whole, however, we consider that the Thána Forest Association has taken a very exaggerated view of the defects of the system. The principle at stake, *viz.*, that the right of occupants to trees in these lands should, having regard to the special conditions of agriculture in the district and the temptations to reckless cutting held out by trade demands, be limited to local use, must be judged on its own merits and cannot fairly be condemned because the rules devised to give effect to it have been unnecessarily rigid, or have been occasion-

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TREES IN OCCUPIED LANDS.

ally misapplied. We admit that the present rules seem to us to interfere to an unnecessary extent with the occupants' free use of the trees for local requirements, but we see no good reason why the vital principle of the system should be sacrificed.

Recommendations.

99. We think Government would be unwise to forego the advantages which the terms of the Kolvan and Sanján Settlements now present for securing the very wise intention of the framers of those settlements that the *varkas* land measured off and allotted to occupants should supply as far as possible their needs for fuel and *ráb* for home and field use. Experience in other *tálukás* has clearly demonstrated the inexpediency of unconditional concessions of all but the royalty trees in favour of occupants. We cannot, therefore, recommend any action being taken in the Kolvan-Sanján villages which would inevitably lead to similar results. Uniformity is no doubt desirable in all matters affecting the rights and privileges of occupants, provided it can be attained without undue sacrifice. To purchase such uniformity however by making over unreservedly to the occupants of the Kolvan-Sanján villages all the tree-growth in their lands with full liberty to cut and sell it in the best market would be to pay too dear a price.

100. Such a course would, we are convinced, be against the true interests of the people themselves. The steps taken in other *tálukás* cannot be re-called, and we observe with regret that the doubts as to whether the Sanján Settlement applied to Umbargáv, have been such as to leave Government no alternative but to remove the restriction on sale of other than the excepted trees in that tract. But in all the villages in which these settlements were clearly introduced we would certainly retain the present restriction against the export or sale for export of all junglewood trees in *varkas*. We would in fact make over these trees to occupants at the same time and on precisely the same conditions as the royalty trees, except that in no case should any portion of the value of the junglewood trees be recovered. If considered necessary, for purposes of Abkári administration, the proprietary rights of Government in *mowra* trees can be retained. Wherever there are royalty trees in any holding which the occupant agrees to take over on the terms proposed, an additional clause about the junglewood can be added to the agreements in the Sanján-Kolvan villages. If there are no royalty trees in the holding then only will a separate agreement be necessary as regards the junglewood. The present rules under Section 75 of the Forest Act and Section 44, Land Revenue Code, will of course continue in force, but will apply only to the occupants who may not accept the settlement herein proposed.

101. We believe that the settlement above recommended will remove all reasonable grounds of complaint which the inhabitants of the villages coming under the Kolvan and Sanján Settlements now have, without sacrificing the principle involved, or in any way encouraging reckless denudation. But again we must repeat, to prevent all misunderstanding, that these proposals are made solely on the assumption that the working of the rules under Section 41 will be made really effective, as we shall propose in another part of this report, by extending the definition of the word timber used therein so as to include all building timber and firewood removed from occupied lands. If the export of firewood from private holdings is thus effectually controlled, and the supply thus available utilised solely to meet the local demand, the drain on the public forests will be proportionately lessened, while the risk of improvident destruction of trees in occupied lands will be much diminished. So long as the rayats feel that their enjoyment of the trees for their own use will not be interfered with, and will not be made a source of revenue by Government, we believe they will cheerfully acquiesce in the restrictions against export. The Thána Association has, on behalf of the inhabitants generally, though condemning the existing Kolvan and Sanján system, accepted the principle that such restrictions are necessary and dictated by good policy. Many of the witnesses have fully endorsed this admission. Thus Mr. Ardesar Dárabji, Thána Witness No. 38, an intelligent Pársi land-holder in the Umbargáv *peta*, while declaring the present restrictions on cutting wood for domestic and agricultural purposes from occupied lands to be vexatious, and that occupants are thereby discouraged from improving the tree-growth on their lands, admits that permission should be insisted on when occu-

pants cut for trade and should only be granted if there be surplus stock of wood over and above the wants of the holders and the cultivators of the land. Similarly Thána Witness No. 37, Govind Náráyan also of Umbargáv, states:—"The present restrictions as regards trees in *málki* numbers are not liked by the people, because they are intended to benefit the Government, but if the people were assured that they would get the full benefit of the tree-growth in their numbers, any restrictions with regard to their disposal would be acceptable to them. * * Under the present restrictions we have no inducement to improve the tree-growth in our *málki* lands." The above extract we believe faithfully reflects the view of the question generally held by the local residents of the Sanján and Kolvan villages. The *mámlatdár* of Sháhápur, an experienced native official, expresses a similar opinion and states, (*vide* Volume II., page 38):—"The occupants should be at full liberty to cut wheresoever and whatsoever they want for their own use and also for the use of their tenants; but they should strictly be forbidden from selling without permission. Such permission should only be granted when there is a surplus stock of wood over and above what is necessary for the occupants' own use." The *mámlatdár* of Dahánu (*vide* Volume II., page 92) also would allow jungle trees to be cut for firewood without permission. "The only restrictions I would impose," he writes, "are that permission should be obtained when the wood is required for building purposes and that no wood should be cut for trade."

102. If the recommendations made above as regards the disposal of (1) the royalty or specially reserved trees throughout the Thána district, and (2) all other trees reserved under the Sanján-Kolvan Settlements, commend themselves to Government, all the difficult questions of the respective rights of the State and the cultivators in lands held under the survey tenure will be set at rest in a manner that will, we believe, satisfy the reasonable wishes of the Memorialists. At the same time it may be confidently hoped that the proposed restriction on the export of all the trees now reserved will ensure the maintenance of a permanent supply of wood in occupied *varkas* lands for local consumption. The present drain on the State forests to supply local wants on favoured terms will be proportionately lessened, and the latter will be better able to meet, with due regard to the preservation of their capital stock, the ever growing demands of Bombay and other trade centres. Non-resident land-lords and capitalists who have bought *varkas* lands on speculation in the expectation of realising large profits on the sale of the trees therein, without regard to the needs of the actual cultivators of the land, will probably grumble at the restriction on the export of trees which they may have hoped would be unconditionally made over to them. But their interests as compared with those of the *bonâ fide* resident agriculturists are of secondary consideration, and when these interests clash, the first care of Government should be for the latter.

Measures to check reckless destruction of unreserved trees in occupied lands.

103. It remains to consider whether any measures direct or indirect are now possible to check wholesale and reckless denudation of occupied lands in which the trees have already under the settlements in force become the absolute property of occupants, and in which no rights have been retained by Government. As a consequence of the introduction of the Survey the right of Government to all trees but teak, blackwood and sandalwood, and in some localities *tivas*, has already been surrendered without condition to occupants, except in the villages coming under the Sanján-Kolvan Settlements. It was no doubt hoped and believed at the time that the valuable tree property thus made over to occupants would be carefully used by them, and would enable them to meet their wants as regards wood for agricultural and domestic purposes and *ráb* materials in a way most convenient to themselves, and would make them to a great extent, if not entirely, independent of forests as a source of supply. Experience has shown that this hope was delusive, and that the step was an unwise one. The people previously had the free user of the trees for domestic and agricultural wants, but had neither exercised nor claimed the right of disposing of the trees or their produce by sale for trade purposes.

104. Had effective restrictions on the use of forest lands been imposed at the same time on those to whom these trees were made over, and had occupants

been made clearly to understand that if they destroyed the trees they could not fall back on the forests to supply their wants without full payment, it is possible the trees might have been more generally preserved than they have been. As it was, the result, if not anticipated, was at least inevitable. So long as an occupant could obtain all the wood and *ráb* material he required for his own consumption free from the forests, it was clearly his interest to realise all he possibly could from the tree property thus made over to him and replace the material, which he would sell in the highest market, by produce obtained free from the forests as he might require it. . The action thus taken was in fact a direct incentive to occupants to clear for cultivation lands which were intended to give them a permanent source of material for ash manure and wood useful for domestic and agricultural purposes, and so defeat the chief object in view in making allotments of *varkas* land. In the Sanjan and Kolvan villages, where, owing to the restrictions on sale of the trees in private holdings, the trees have been perforce preserved for the purposes intended, the people are to a great extent independent of other sources than their *varkas* allotments for wood and *ráb* material.

105. The demands of Bombay and the comparatively treeless districts within reach of the eastern boundaries of the Konkan for timber and firewood were considerable even at the time of the introduction of the Survey into the Thána District. They have since increased enormously by reason of the growth of population and the spread of cultivation, and have naturally given a great impetus to the clearing of all forest lands included in private holdings. The history of the sales of teak trees under the Ellis Rules in Kalyán and elsewhere shows the same results. A large quantity of timber altogether in excess either of the local or export demand was then felled and sold at such nominal prices that the temporary gain to occupants can have been little, while in many cases the permanent inconvenience owing to reckless cutting must have been great.

106. The justification of all claims by the local population to be provided free or at favoured rates with material from Government forests, rests on the assumption that the supply obtainable from their occupied lands is insufficient to meet their domestic and agricultural wants. The Memorialists cannot consistently ask for liberty to sell all the trees in their lands in the highest market for export to Bombay, and to replace the material so sold with other material obtained free or at less than the market rate from the forests. If Government allow any occupant to take forest produce free or at favoured rates, because the supply on his private holding is insufficient for his wants, it is obviously right that they should insist that that occupant shall utilize to the full whatever produce his own land yields, in satisfaction of his own wants before he takes advantage of forest privileges. If an occupant sells wood from his land for profit it may fairly be presumed that he has sufficient wood for his own consumption without having recourse to forests. In other words complete free trade in the tree produce of private holdings is incompatible with allowing the occupants of such holdings to draw supplies from public forests on other than strictly commercial principles.

107. Our inquiries lead us to conclude that for many years to come the cultivators of the *tálukás*, in which no common trees have been reserved, will be dependent on State forests to a great extent for their necessary supplies of wood and *ráb* material. The cultivators of the Sanján and Kolvan *tálukás* will be to a much less extent dependent on such external aid, but they will not be able to do altogether without it. The disposal of the royalty trees in the manner suggested will everywhere *pro tanto* lessen this dependence on public forests, and if occupants are once made to realise that it is to their own personal interests that this source of supply should be carefully preserved, and if necessary increased, the benefit likely to arise from this measure can scarcely be exaggerated. Taking into consideration, however, the probable extent of the local demand for wood for fuel, building and farm use as compared with the present total area of occupied *varkas* land capable of profitably producing wood, we can scarcely hope that the local residents of Thána, and especially those of the more populous tracts, can ever become completely independent of the State forests as a source of supply for timber and firewood, even if in years to come they may no longer

have to draw on the forests to meet their *rab* requirements. It must be borne in mind that most of the area formerly set aside as village reserves or *gurcharan*, which would otherwise have been available to supplement any deficiency in the supply from private holdings, has already been absorbed in the Reserved forests as now constituted.

108. Assuming then that some privileges in forests of greater or less extent according to local circumstances will always have to be conceded to local residents, the question is how such privileges can best be minimised, and how far the abuse of such privileges can be checked by insisting that the private forests shall be fully utilised to supply the local agricultural demand before the deficiency is made good at favoured rates from public forests. It is of the greatest importance that this question should be satisfactorily settled. The right to trees in occupied lands parted with unconditionally at the Survey cannot be resumed so as to be re-conveyed under conditions precluding sale for export, nor can it be made penal to cut trees for sale or profit in such lands except under permission of some duly constituted authority, without special legislation, nor could the only other means which suggest themselves for indirectly securing the same end, such as preventing the export from the district of the tree produce of occupied lands by absolute prohibition, or prohibitive duties, unless cut under special permission, be attained without similar legislation. Government would rightly hesitate to resort to such extreme measures, which would necessarily lower the value of private property, unless assured of the full acquiescence in such a course of the persons interested, expressed through their duly authorised representatives.

109. That we have given the most anxious consideration to this subject will be apparent from the preamble to the question addressed to the officers mentioned in paragraph 34 of Chapter I (*vide* Vol. II., page 306), in which the various means by which tree-growth in occupied lands can best be preserved to meet local as distinguished from trade demands have been tentatively described. The arguments for and against the measures therein suggested have been very fully and ably stated by several of the officers who have replied to the question. We need not here recapitulate these arguments in detail but would suggest a careful perusal of all the opinions elicited on the subject. It is sufficient to remark that, of the official witnesses consulted, Messrs. Ebden, Loch and Thatte express themselves generally in favour of special legislation to attain the object in view, either independently or as a result of a compromise with the local residents. Mr. Keyser, while deprecating any resumption of rights parted with at the Survey, would still regulate the felling of trees in occupied lands. "No wholesale felling," he writes, "for trade purposes should be allowed without a permit, which should only be withheld for valid reasons to be given in writing, and an export duty might be chargeable on all wood sent out of the district which it would not be necessary to levy from contractors, or unless it was thought expedient, on wood shipped from occupied numbers under a permit. By means of this duty the dealings of traders with wild tribes might be regulated, and abuse of privileges by the latter, or by others allowed to collect firewood free, prevented." On the other hand Messrs. Mulock, Shuttleworth, Mackenzie and Atkins consider legislation on the subject would be open to more or less serious objection, though the last-named officer admits the probable efficacy of the measures suggested. Mr. Sinclair, writing with reference to the Kolába district exclusively, denies the preamble of the question and "considers the first two remedies for the imaginary evil to be morally wrong and would shake the credit of Government with its subjects." Had he read the preamble of the question more carefully and studied the local evidence on the subject, he would have seen that the evils are not considered imaginary by the more intelligent and influential witnesses, and that the remedies suggested as a possible means of lessening the evil were based on the clearly expressed opinions of those representative witnesses that restrictions should be placed on the *sale* of unreserved trees in occupied lands.

110. We must here call special attention to the replies of the Thána Association to the question under notice (*vide* Vol. II., pages 348—355). It will be seen from this that the local residents of Thána and of the Panvel *táluka* of Kolába

are not opposed to legislation which will prevent occupants from exporting or selling for export the tree produce of occupied lands, which ought not, having regard to agricultural wants, to be so exported, provided what they deem adequate guarantees are given to prevent such a measure being allowed to become a source of revenue to Government or of undue hardship to occupants, and provided also that the rights of the rayats with regard to State forests are, as a compensation for the restrictions imposed, clearly defined in the manner and to the extent they suggest. They deprecate any resumption of rights parted with at the Survey with the object of re-conveying such rights under limitations, thinking such a measure would have too much in common with the present Sanján-Kolvan system, which they consider open to grave abuse. They condemn on other and, as we think, stronger grounds, the further proposal to legalise the levy of a prohibitive duty on the export of timber cut without permission from occupied lands. But they see nothing objectionable in the alternative suggestion that it should be made penal to export or sell for export any trees from occupied lands without previous permission having been obtained—a plan which would practically and by a simpler process secure the same result as the resumption by Government of proprietary rights in the trees, but in a manner less suggestive of arbitrary spoliation.

111. We may here quote the exact words in which they admit the existence of the evil complained of and accept the principle that a legislative check is, under certain conditions, desirable :—

"Several representative witnesses examined before the Commission on behalf of the Association have already expressed their opinion that in view of the several temptations too strong to be resisted by rayats of average foresight and intelligence having been necessarily thrown in their way, it becomes necessary to impose certain restrictions on the free sale of tree produce from occupied lands for purposes of trade and the consequent pecuniary profit, so that agricultural interests may not be altogether subordinated to the considerations of immediate pecuniary profit to the occupants. The same representative witnesses have further admitted, directly or indirectly, the impropriety of the system under which occupants may sell for their own advantage the maximum amount of tree produce from their occupied lands, and replace from the common forest lands all materials necessary for their domestic requirements, even though, as has been already shown in the observations recorded in the first part of this statement, they in common with others have had the right guaranteed to them at the original Survey to supplement from the common forest lands everything which they required, provided that it was not available in their own occupied lands. It will be thus seen that what enlightened public opinion in the Thána district will support amounts to a proposal to legalize restrictions on occupied lands which will prevent their occupants from exporting or selling for export some specified tree produce of their occupied lands unless they undertook to prove to the satisfaction of a competent authority that what they proposed so to dispose of was over and above their domestic and agricultural requirements. The Association entertains no doubt whatever, notwithstanding any thing which the Conservator of Forests, Northern Circle, Mr. Shuttleworth, may choose to say to the contrary, that such a legislative measure will be cheerfully acquiesced in by the Thána rayats, provided that adequate guarantees are taken against its being abused in the same way that the Kolvan-Dahánu system came to be abused in the fiscal interests of the Forest Department, and provided that ample legislative provision was made to enable the Thána rayats to supplement their reasonable wants from the common forest lands."

112. They then proceed to describe the scheme which has received the approval of the leading representatives of Thána and the Panvel *táluka* of Kolába. The leading points of this scheme are as follows :—

(*a*). Occupants are to be considered the proprietors of all trees in their holdings and to have full liberty to use them for domestic and agricultural purposes without the necessity of obtaining previous permission.

(*b*). Written permission from the *mámlatdár* of the *táluka* is to be obtained before exporting or selling for export timber of seventeen specified trees which include all the more valuable species.

(*c*). The application for permission is to be on plain paper, and no charge is to be made for the pass which will convey the necessary permission.

(*d*). All applications for permission are to be disposed of within two months, and failing such disposal, it shall be presumed that permission has been duly given.

(*e*). An appeal against a *mámlatdár's* refusal to grant permission is to be allowed to the Subordinate Judge having jurisdiction in the *táluka*, whose decision shall be final.

Lastly (*f*). If an occupant once permitted to export a specified quantity of tree produce applies, any time after seven years, for permission to export a similar quantity, the permission is to be granted without further inquiry, provided the area previously cleared has during the interval been allowed to remain under tree-growth.

113. They then set forth the concessions they ask for as a set-off against the restrictions. These are in substance as follows :—

(*a*). Free grazing for all village cattle in all forest lands except assessed waste numbers and *kurans*. Non-forest villagers as well as forest villagers to be allowed to graze their cattle free in forests wherever this has been the custom.

(*b*). Permission to lop all trees for *ráb* except teak and blackwood in all waste lands except Imperial forests demarcated before 1870.

(*c*). Free wood for agricultural implements, including bamboos, &c., for garden cultivation, and other agricultural requirements from the same areas. Arrangements also to be made for a sufficient supply of the teak leaves required by rayats for lining corn-bins and thatching purposes.

(*d*). Free firewood by *head-loads* from, presumably, the same areas, for domestic consumption and sale. The privilege to extend to the taking of live as well as dead wood, subject to the reservation of thirteen specified trees, and a further stipulation that the number of these reserved trees may be reduced by the Collector on a representation of the people supported by at least two-thirds of the members of the Táluka Local Board, but may not under any circumstances be increased.

(*e*). Firewood removed from the same areas by carts for domestic use and sugar-boiling, but not for sale, to be paid for at the rate of 4 annas per ordinary and 8 annas per large cart-load.

(*f*). Free wood of unreserved kinds for repairing huts, and free *kárvi*, bamboos and reeds, for home consumption or sale for the poor and depressed classes.

(*g*). The establishment of depôts at central villages in each of the circles into which a *táluka* is divided for the purpose of Local Board elections, where superior kinds of building timber and other timber required for making or repairing carts, wheels, axles, &c., shall be kept for sale at favoured rates, to be fixed in consultation with the respective Táluka Local Boards, and when once fixed not to be changed except with the consent of such Boards duly recorded at meetings at which at least two-thirds of the members shall be present.

(*h*). Recognition of or non-interference with the custom of non-forest villagers to resort to forests to supplement their wants wherever such custom is now found to exist.

114. In addition the Association recommends that all unoccupied unassessed waste lands in every *táluka* except the old Imperial forests, save only those which are incapable of being reboised, should be assessed in the same way as allotted *varkas* lands were assessed at the Survey, with this difference only, that the rates should be somewhat lower, and that the lump sum thus estimated for the whole *táluka* should be roughly distributed among the holders of rice lands in the *táluka* on a scale under which those who have no allotted *varkas* will pay proportionately more than others, and so forth, and that such lands should be handed over to the District Local Board for management and control under provisions like those sketched out above.

115. In case the scheme above described is not approved, the Thána Association proposes an alternative compensatory measure for the loss of full freedom as regards disposal of trees in occupied lands. The substance of this proposal is as follows :—The demarcation of forests already effected and

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in course of completion should be allowed to stand provisionally for say twenty-five years. In the interval active efforts should be made to reboise all the waste lands excluded from forests, capable of being so treated with success. These lands together with the present area of Protected forests should be assessed in the manner described in the preceding paragraph, and the proceeds of such assessment should be devoted to their reboisement, which with the co-operation of the village communities may be expected to be accomplished in the period named. In the meantime facilities should be given to the rayats to satisfy their requirements in the manner suggested in the first scheme. After the expiry of the period fixed the area so reboised should be supplemented by disforesting a further area from the already constituted Reserved forests, and the whole should be constituted village forests and handed over to the District Local Board for management under the professional advice of the Forest Department.

116. Such are the terms asked as compensation for the proposed restriction on export of the now unreserved trees in occupied lands. As we do not, after mature consideration, consider any such settlement of the question based on a compromise of the nature indicated to be now practicable with due regard to public interests, we do not propose to discuss or criticise these schemes in great detail. It will be sufficient to make a few general observations on the proposals as they now stand. The guarantees mentioned in paragraph 112 against the first scheme becoming a source of public revenue, or of undue hardship to local residents are on the whole reasonable; but clause (*e*) providing for appeals from decisions by *mámlatdárs* to Subordinate Judges is unusual and open to very grave objections, and clause (*f*) would also require alteration before acceptance. Unless *all* trees were brought under rule requiring previous permission before exporting or selling for export the object of the measure would be defeated. These matters might no doubt be easily arranged, but the concessions asked by the Association in return for the restrictions are, as far as we can judge, quite incompatible with the permanent preservation of the Thána forests. Under the first proposal permanent privilege, of a nature which would render all attempts at systematic conservancy futile, would be given throughout an area which we have reason to believe comprises all the more valuable forest lands of the district. It is obvious that under a scheme, which would permit irregular exploitation of the forests for so many purposes, and the removal of unknown quantities of produce, according to the demands of the day, with no check against waste and extravagance, or against the wholesale export of firewood collected under head-load privileges, and with no regard to the ascertained limits of the maximum annual yield of the forests, all hope of maintaining the Thána forests as a permanent source of supply either for local or external demands would have to be abandoned.

117. The alternative scheme is alternative in name only. It is practically the same as the first. The same privileges in the same areas are asked for for twenty-five years, after which all the waste lands rejected in demarcating the forests, supplemented by what may then be considered, having regard to the then condition of those rejected lands, to be a sufficient area to supply local wants, are proposed to be made village forests and entrusted to the management of Local Boards. The first scheme in fact contemplates that a *definite* area shall be made village forest immediately and as a permanent measure, to consist of all unassessed waste lands in the district, save and except the old Imperial forests, while the second scheme contemplates that the same areas shall virtually be village forest for twenty-five years, and that after that an *indefinite* area, according to the requirements of the day shall become village forest. Under the last scheme the area to be eventually transferred from reserved to village forest will presumably be greater or less according as the efforts to reboise the rejected lands in the interval are less or more successful. Such lands could not in any case be successfully treated without strict closure. If it were to the direct interest of the villagers concerned that such lands should be reboised within the interval named, their co-operation might of course be expected. But one of the many weak points of the scheme proposed is that a strong motive for a contrary course of action is suggested by the idea that would inevitably prevail, that the less suitable the rejected lands should be

shown to be to supply local wants when the redistribution has ultimately to be effected, the greater the area of reserved forest which would be required to supplement them.

118. We do not propose to pursue the subject of local supply as affecting forests further at present. The best means of satisfying the reasonable wants of local residents as regards all kinds of forest produce have been discussed under each separate head in its appropriate place, and apart from the special question as to the disposal of trees in occupied lands. But it has been necessary to describe here the schemes suggested by the Thána Association, as the connection between the two subjects has been made closer than it would have otherwise been, owing to the proposed settlement by compromise. The terms formulated in answer to the question under notice also show more clearly and comprehensively the real aims and aspirations of the Thána people, than do the statements of any individual witnesses, or any of the memorials, in all of which the real issues are more or less obscured by vague and general assertions of rights.

119. Under proper regulations we have no doubt that the State forests can liberally supply all the reasonable wants of the local population without risk of undue exhaustion, but the necessary arrangements for this end should be made independently, and not as the result of any bargain with regard to the trees in occupied lands. We are reluctantly compelled to conclude that it would be inexpedient if not impracticable to check the cutting of unreserved trees in private holdings for trade purposes by legislation whether with or without the concurrence of the occupants interested. Any settlement of this question by compromise would be a difficult and delicate matter. It would be impossible to estimate even approximately the value of the concessions to be made on each side. Moreover advantage would inevitably be taken by many occupants of the interval between negotiation, discussion and final settlement by legislation, to cut and sell as fast as possible all trees of which the export market value could be realised before the proposed restrictions should come into operation.

120. But although legislation on the subject seems for various reasons unadvisable we still think much good may be effected by judicious executive action with the same end in view. The various forest privileges as regards supply of wood and *ráb* materials, which we have recommended should be ordinarily allowed to the local population in the portion of this report dealing with local supply, should be made to depend, in the case of occupants having private supplies in their own holdings, on the discretion which such occupants exercise in availing themselves of the liberty they now have to dispose of the unreserved trees in any way they please. In other words, if an occupant abuses this discretion and sells the trees in his land to a trader to be exported to Bombay or manufactured into charcoal, we would henceforth deprive him of all special forest privileges to which he would otherwise be entitled, on the ground that his own action creates a reasonable presumption that he has no need of them. As long as he uses the tree property on his land exclusively to supply his own *boná fide* wants, and not to make profit of, we think, he has a reasonable claim, within due limits, to be allowed to supplement any deficiency in his private supply on privileged terms from the forests. But when he diverts his own private supply to other purposes and carries it to market he becomes a trader and forfeits, we consider, all claims to be allowed to replace what he thus sells, from the forests on lower terms than would be charged to any other trader. Ráo Sáheb Bháu Rámchandra, *mámlatdár* of Karjat, justly remarks on this point (*vide* answer to question 42, Volume III, page 116):—

"There is a general tendency among the people at present to cut down trees in their occupied lands and to sell them. To remedy this the people should be told that all trees in their lands were given to them at the Survey Settlement for their own use but that they should not sell them to the traders. If they do not use the trees for that purpose alone they should not be given anything gratis from Government forests, but a heavy price should be charged for any forest article which they might require from the forests."

121. We recommend therefore that all occupants of lands in the Thána district should be warned by public proclamation to the above effect and invited to apply for permission before exporting or selling for export any trees of the unreserved kinds in their holdings. They should be informed that such permis-

sion will only be granted if the applicant can show that he has surplus produce over and above his own wants if himself a cultivator, or those of his tenants and dependants if he lets his lands to others, and that he and they, in short, are in such a position, as not to require to draw supplies from the forests on privileged terms. They should be further told that if the permission is withheld disregard of such refusal will entail deprivation, as far as the applicant is concerned, of all special forest privileges. Whenever transit passes are applied for to export timber or firewood of unreserved trees from occupied land (presuming always that the law will be amended so as to make such control possible) the applicants should be asked to show that the permission to cut has been duly obtained. Transit passes cannot of course be legally withheld, even should no such permission be forthcoming, but an opportunity will thus be given for taking down the name of the occupant who has disregarded the injunctions and intimating to him that if, in face of the warning given, the transit pass for export is demanded and utilized, he will be liable to have his name entered in a list of persons declared ineligible to exercise directly or indirectly any of the ordinary privileges in forests granted to local residents, except as regards grazing.

122. A proclamation in the terms above suggested, will, we believe, have a salutary effect, and ought not, seeing how well the question is understood by the leading land-holders of the district, to give cause for any alarm or misunderstanding. If the policy thus suggested be firmly and judiciously persevered in for some years, a great change for the better in the condition of occupied lands is likely to be brought about. Such a policy ought to have and, we trust, will have the loyal support of the local residents. As a check on improvident destruction of trees, it would not of course be so complete and effectual as a check imposed by legislation. But the knowledge that the power to withdraw forest privileges from reckless occupants was held in reserve, and would be exercised if necessity arose, would deter many from yielding to the temptations to sell their trees to export wood dealers.

123. We are also of opinion that the preservation of the tree-growth on *varkas* lands may be indirectly encouraged by reducing to a nominal amount the assessment on fields, which occupants may agree to preserve exclusively as *shindáid* to supply ash manure for rice cultivation. In answer to the preliminary circular questions as to what inducements could be offered to encourage cultivators to grow trees in their own lands to supply their own wants, and to discourage improvident sale of trees, several officers have suggested remission of assessment on land devoted to the growth of trees (*vide* answers to question 41, Volume III, pages 111-114). We quote in particular Mr. Atkins' reply to this question :—

"At the revision survey I would divide *varkas* numbers into (1) numbers for cultivation, (2) '*shindádi* lands', and would assess the former at a high rate of (say) 8 annas per acre, and reduce the assessment of the latter (except valuable grass lands of which the grass can conveniently be exported to Bombay) to a nominal sum of (say) one anna per acre. I would treat as *shindádi* lands all *varkas* numbers of which the owners agree that they will not use them for cultivation, will not sell the trees they contain without permission, and will not lop the leading shoots of those trees for *ráb*."

As the plan thus suggested appeared to be worth serious consideration we have made it the subject of further special inquiry and discussion. We have described it in the preamble to the question (*vide* Volume II., page 306) addressed to the official witnesses orally examined by us, as one of the ways in which some measure of control might be obtained over the traffic in the tree produce of occupied lands, and invited full criticism on it. Mr. Atkins has taken advantage of the further opportunity thus afforded him to explain his scheme in greater detail. He writes :—

"I propose to considerably raise the assessment of *varkas* lands at the revision survey, and to remit (the remission being made at *any time* by the Collector) either the whole or the greater part of that assessment in all cases in which a guarantee is given that they will be used exclusively for their more legitimate purposes, *viz.*, the growth of trees to supply *ráb* material for the rice lands, and wood for the private use of the occupants. I do not pretend that the effect of this scheme will be very great. But it will at all events place cultivators who use their *varkas* for its more legitimate purposes at an advantage as compared with those who use it to make a *separate* profit. The ridiculously low assessment

of ½ or 2 annas per acre placed on most *varkas* lands at the Survey was no doubt due to the impression then prevailing that those lands would be required and would mostly be used to grow *ráb* material to burn on rice lands as manure, and that consequently to charge more than nominal rates for *varkas* would practically be equivalent to increasing rice field assessment. Those cultivators who now agree to use *varkas* only for purposes subsidiary to rice cultivation should have this advantage continued to them, or even increased (by the remission of the whole of their assessment): but those who make from the lands a *separate* profit as distinct from that on rice cultivation should, surely at the earliest possible opportunity, be made to pay a fair and not a nominal assessment. The latter people cost Government more than the former because they expect Government to provide them with the tree produce which the former grow for themselves.

"I may mention that it will be no more difficult to prevent the cultivation of the not to be cultivated *varkas* lands, (or *shindádi* lands) than it will be to prevent the cultivation of a portion of a village site or of grazing land, or any unoccupied land. In each case the remedy under the Land Revenue Code will be of the same nature."

124. Messrs. Mulock, Mackenzie and Ebden also consider the proposal to be practicable and worth trial. Mr. Loch thinks that occupants who had already cleared their trees would accept the terms offered, but doubts whether those holding fairly well wooded lands would do so. On the other hand Mr. Thatte thinks the proposal "unnecessarily hard on the poor cultivators." Mr. Sinclair thinks the scheme altogether impracticable, but gives no reason for so thinking. Mr. Keyser writes:—

"Mr. Atkins' proposal is not feasible and were it so, no *varkas* land in the South Konkan could bear an assessment of eight annas. All interference in the management of occupied land would be attended with great difficulty, and should be minimised as far as possible. Mr. Atkins' proposal would entail annual inspection of an enormous area, and the assessment on most profitable *varkas* lands, those in the Northern Konkan which grow grass for the Bombay market, would be unduly reduced."

We do not however see how the assessment of profitable grass lands would be unduly reduced under Mr. Atkins' proposal, as he would specially except "valuable grass lands of which the produce can conveniently be exported to Bombay" in settling what lands should be considered as *shindádi*.

125. Colonel Godfrey also, in answer to special questions addressed to him on the subject states as follows (*vide* Volume II., page 246):—

"I do not consider that it will be practicable to divide the *varkas* lands as proposed. It certainly cannot be done by the Survey Department. In the first place I do not think the villagers will agree to such a division. I think it will also be difficult to know which lands in particular produce grass for export to Bombay and to define such lands. Grass is taken from *shindádi* lands as well as from others. The measurers could not be entrusted with the division of *varkas* lands, as most of them have very vague ideas as to the value of land for cultivation, grass or *shindád*. It would be difficult to frame hard-and-fast rules for their guidance, and a good deal would have to be left to their discretion, which I think is very unadvisable.

"No cultivator will agree, I should say, to have his liberty of making use of his lands as he pleases interfered with in any way, even though a lower assessment is placed on the land. The assessment is already so low that the gain the rayat would get from reduced assessment would be more than counterbalanced by loss of liberty to make use of the land as he pleases. The rayat is liable to change his mind at any time as to the use he may make of the land, and his being tied down and under supervision, and made liable to punishment for infringing certain rules with regard to what he may or may not do with his land would be insufferable. The rayat likes, above all things, to be left alone and not bothered, and he would rather pay more and have his own way than place himself under restrictions and become liable to be hauled up by subordinates for infringing them.

"If land is assessed low on the express stipulation that it may not be cultivated, some supervision will undoubtedly become necessary to detect unauthorized cultivation. The difficulty, expense and worry to the people, and proceedings which would ensue on breaches of the conditions is undoubtedly a fatal objection to the sub-division which, if made, would, I think, eventually lead to much discontent, and would be impolitic."

126. The objections raised by Colonel Godfrey deserve careful attention: but we do not think that the difficulties he points out are insuperable. The evidence shows that a few intelligent land-holders are already making serious efforts to set apart portions of their *varkas* holdings for tree-growth. It is obviously desirable to encourage them to persevere in their efforts and to induce others by all possible means to follow their example. We can think of no plan so

likely to effect this object as the reduction or remission of assessment of lands so set apart, subject to certain necessary conditions. Some modifications in Mr. Atkins' plan will certainly be necessary, but the principle of reducing the assessment on lands held exclusively as *ráb* lands is in our opinion unquestionably sound. We do not think it will be practicable to differentiate, by any classification made at the revision survey, the lands suitable for *varkas* cultivation and grass, from others which are more suitable to be set apart as exclusively for the growth of trees necessary to supply *ráb* and wood. Such an arrangement would no doubt have been both practicable and judicious at the original Survey when the distinction between cultivated *varkas* and *shindád* land was clearly marked, and before any allotment of such lands to individual cultivators was made. The *varkas* and *shindád* lands have been measured at the Survey into comparatively large blocks, each such block being further sub-divided amongst numerous separate co-occupants, who pay assessment in proportion to the area held by them. This excessive sub-division makes it impossible now to divide the principal number by natural boundaries into compact blocks of *shindád* and *varkas* respectively, without including all the lands held by some cultivators in the former category, and all the lands held by others in the latter. Existing possession cannot be disturbed, and it cannot be expected that the holders of the minute sub-numbers will agree to redistribute the land amongst themselves, so as to give each his fair share of land of each description.

127. Whatever settlement is made must, therefore, be made by arrangements with individual cultivators. Here again we are met by the difficulty that the sub-divisions of *varkas* lands, though duly shown by the maps of each number attached to the village *suds* or registers, are not, on account of the labour and expense such an arrangement would entail, demarcated by actual boundaries on the fields. The cultivators themselves, except in the case of more valuable *varkas* lands, have also, as we have before had occasion to remark in regard to the disposal of the royalty trees, a very imperfect knowledge of the boundaries of their own holdings, either as shown in the maps, or as actually recognised *inter se*. It will, therefore, be necessary, before any land can be set apart as *shindád* on reduced assessment by agreement with an occupant, on condition of his preserving the trees and not cultivating the land, that the boundaries of such land shall be clearly laid down on the field, as it would be otherwise impossible to detect unauthorized cultivation or any other breach of the condition.

128. It will also we think be advisable to make it an invariable condition of reduction of assessment on lands set apart as *shindád* that the grass on the land shall not be exported or sold for export. This condition is necessary in the absence of any regular classification of lands as *varkas*, *shindád* or *khap* (*i.e. ráb* grass lands), to avoid the risk of occupants who habitually sell the grass on their lands for export, and who have no intention of either cultivating them or letting trees grow on them, unnecessarily getting the benefit of the reduced assessment. On the other hand the condition would not deter any occupant who wished to keep his land exclusively for tree-growth from accepting the terms offered.

129. In accepting the principle of Mr. Atkins' proposal we must, however, guard ourselves against the possibility of being understood to advocate that the assessment on lands retained as *varkas* should be raised, with the intention of in any way forcing occupants to accept conditions under which a lower assessment would be imposed. An increase in the *varkas* rates of the Thána district at the revision survey may very likely be justifiable on other grounds, the examination of which is beyond the scope of our inquiry. But if the rates are raised at all, the increase should be made solely with regard to the ordinary conditions governing survey assessments and on no other considerations.

Recommendations with a view to secure the setting apart of suitable areas as *shindád*.

130. Having now fully discussed this question in all its bearings we venture to recommend that the following plan be given a fair trial when the new rates are announced in any village at the revision survey. All occupants of *varkas* lands should be informed that any occupant who is willing to devote any portion of his *varkas* area as *shindád* during the currency of the settlement, and will agree not to cultivate the land, or to export or sell for export either the

trees or the grass produced by the land, and to defray the expense, if the land does not consist of an entire principal *varkas* number, of putting up boundary marks to define it, may have such land measured off, and the assessment on it reduced to one-fourth of the normal amount, provided that the land in question comprises either the whole of one or more existing *phálni* numbers, or any portion or portions of an existing *phálni* number measuring not less than five acres. The Collector should be empowered to entertain any such applications at any time during the course of the settlement, the necessary arrangements for measurement, demarcation, and endorsement of village records being carried out under his orders by the Inspectors of the Agricultural Department to whose charge the survey records will by that time be transferred.

Special recommendations as regards the disposal of trees in occupied lands in the Kolába district.

131. The proposals made above have been suggested with special reference to the Thána district. A full consideration of the circumstances has led us to the conclusion that it will not be expedient or necessary to apply the same settlement to the Kolába district. In the first place there is an essential difference between the *varkas* lands of the Kolába district (at any rate the southern part) and those of the Thána district. In reply to a question put by us, Mr. Sinclair has stated :—

"There appears to be an idea in the minds of some officers that *varkas* is a tenure or rather a prescription of use of certain lands for manure and other purposes connected with the cultivation of other (namely, rice) lands. *Varkas*, however, means nothing but *upland* ; and this theory based upon the Pendse case and the peculiar circumstances of a part of the Thána district is by no means of universal application.

"In Mahád and Mángáv particularly there are many upland holdings which are independent of any rice land, and are the sole support of the occupants. The staple grains, indeed, of the Mahád *táluka* and of most of Mángáv and part of the Roha are the dwarf millets grown only upon the uplands without artificial irrigation. I do not see how any officer familiar with the language and agriculture of these districts can doubt that the people are right in maintaining, as they universally do, that upland is as legitimate a subject of the *dhára* or proprietary tenure as rice land, or any other.

"The retaining terraces of these old upland fields, and the trees growing on them, furnish ample evidence of ancient and continuous cultivation broken only by the necessary fallows."

Secondly, loppings of timber trees for ash manure are not in such general use in Kolába as in Thána. Various kinds of shrubs are there substituted for the *ain* and other valuable kinds which are the favourite *ráb* trees of the Thána rayats. Thirdly, if the *khoti* villages, the forest rights in which "are* now under the separate consideration of Government" and the numerous *dhára* holdings, the right of the tree-growth in which has been admitted to belong to the holders unconditionally, are left out of consideration, the trees reserved to Government will be found to be few and unimportant. Mr. Sinclair in his answer to our general questions says :—

*Government Resolution No. 2483, dated 31st March 1886.

"Practically there are very few 'royalty trees' in Kolába and all these are, all teak."

"There is nothing to be done but to get rid of them *out and out* ; because the existence of Government rights in them is a blister to the few occupants concerned and trouble to the servants of Government, out of all proportion to their very small value."

Mr. Keyser, the Collector of Kolába, takes the same view. He says :—

"I would get rid of all trees in occupied lands by sale at a very moderate valuation.

"Payment should in all cases extend over a term of years, that is, I would enforce it in five or six yearly instalments, with a discount for cash. The full price, however, to be exacted should a felling be made.

"If it is intended that no felling be allowed, the price charged must be nominal. A cultivator cannot afford to pay, if he be not allowed to realise. The value of the timber should be assessed in the first instance by a *panch*.

"But I am opposed to all interference in occupied lands, and refusals to permit fellings should only be within the discretion of the Collector, and not made, except for very special reasons.

"The chief advantage, this measure would secure, would be the reduction of interference in regard to occupied numbers, and the rigid limitation of the scope of the Forest Department's administration to the forest area.

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As regards forest privileges, it will only affect the limited number, who have *varkas* lands of any extent, and who also cultivate rice. The general question of the supply of *ráb* and other forest produce will scarcely be touched by it."

132. Government in their Resolution No. 4126 of 21st May 1885 have sanctioned the disposal of the royalty trees in Kolába *once for all*, and we are given to understand by Colonel Peyton that these orders are being zealously carried out. Under these circumstances it would be unadvisable to burden the sale of trees still remaining to be sold with any conditions precluding export. We recommend therefore that the course which is now being followed in Kolába should be left undisturbed and that when once the royalty trees are either bought by occupants or removed on behalf of Government, all future interference on the part of the Forest Department should cease.

133. As regards the *injáili* trees, there have not been any reservations at the Survey similar to those imposed in Sanján and Kolvan. There was some doubt as to the kinds of trees that were reserved at the Survey in Panvel, but Government Resolution No. 9044, dated 9th November 1885, has decided the point, and Government have now no reserved junglewood trees in any of the occupied lands of Kolába.

134. Although we recommend the unconditional disposal of the few royalty trees still reserved to Government, we are strongly of opinion that the reckless denudation of trees in occupied lands in Kolába should be regulated by executive action in the same way as in Thána. This is necessary, as we are proposing precisely the same forest privileges as regards the supply of wood and *ráb* to the Kolába rayats as to those of Thána. The following extract from Mr. Keyser's statement shows that he also advocates that the export of wood material from the district should be regulated in some way or other. He says :—

"I think, however, the destruction of trees in occupied numbers might be regulated. No wholesale felling for trade purposes should be allowed without a permit, which should only be withheld for valid reasons to be given in writing, and an export duty might be chargeable on all wood sent out of the district, which it would not be necessary to levy from contractors, or unless it was thought expedient, on wood shipped from occupied numbers under a permit.

"By means of this duty the dealings of traders with wild tribes might be regulated and abuse of privileges by the latter or by others, allowed to collect firewood free, prevented.

"Mr. Atkins' proposal is not feasible, and were it so, no *varkas* land in the South Konkan could bear an assessment of eight annas. All interference in the management of occupied land would be attended with great difficulty and should be minimised as far as possible. Mr. Atkins' proposal would entail annual inspection of an enormous area, and the assessment on most profitable *varkas* lands, those in the Northern Konkan which grow grass for the Bombay market would be unduly reduced.

"I am not of opinion that any distinction can be made between trees in different descriptions of lands at this stage of our revenue administration, except that I think it unnecessary for Government to reserve any trees in rice or garden lands. They do not exist in the former, in the latter their growth is generally due to the care and capital of the owners; the reserved trees are few in number, and it is an invidious and difficult task to watch them in enclosed gardens or prevent their removal.

"In controlling the disposal of timber in occupied numbers, it must be remembered that they are an alienable property, vested in occupants by a Government guarantee, and have often been the subject of sale."

We would therefore recommend that the two measures proposed by us above in paragraphs 121 and 130 should be introduced in Kolába as well as Thána, *viz.*, (1) the issue of a proclamation in the terms suggested, inviting occupants to apply for permission before cutting wood for export, and (2) the offer to all occupants of a remission of three-fourths of the assessment of all *varkas* lands which they may agree, under the conditions stated, to reserve permanently as *shindád*.

135. The Kolába Association (*vide* statement of Kolába Witness No. 20, Volume II., page 209) contends that the Dunlop proclamation of 1824 applies to all occupied lands whether *khoti* or *dhára* in the Southern Konkan, *i.e.* the old *tálukás* of Sánkshi, Rájpuri and Ráigad. We asked the Collector of Kolába to place before us all the information on the point. The papers obtained by him

from the Collector of Ratnágiri, together with Mr. Dunlop's letter to Government, of which we obtained a copy from the Secretariat, are printed as Exhibit No. 32 in the Second Volume of our report at pages 405 to 411. English translations of the proclamation are given at page 203 of the Pendse case and also in paragraph 16 of Mr. Jardine's judgment printed at page 407 of Volume II. of this report. This proclamation was withdrawn by orders of Government in 1851, but in the case marginally noted the Bombay High Court held "that Government cannot by issuing a subsequent proclamation resume a grant made by a previous proclamation, inasmuch as it cannot, any more than a private person, without the consent of the donee, revoke a gift actually made."

The Collector of Ratnágiri vs. Venkatráv Náráyan Surve.

136. There is some doubt as to the scope of this proclamation, and, as remarked by Mr. Candy, it has formed the subject of comment in the Civil Courts. The letter written by Mr. Dunlop at the time of submitting the proclamation for the approval of Government is no doubt the best evidence of what his intentions were. In the Band-Tivre case, where the point arose incidentally, Mr. Jardine has made some observations which are extracted from his judgment and printed at pages 406 to 408 of Volume II. The case is yet pending in the High Court along with several other forest suits from the Ratnágiri district, and it is probable the question may again attract the attention of their Lordships; but in the present state of things we are of opinion that Government need not go beyond the principle established by the two leading cases which have been decided by the High Court, and referred to in paragraph 9 of Mr. Candy's memorandum (printed in Volume II. at page 405). In those cases it was held that unless a *khot* was proved to be a *proprietor* of his land, the proclamation neither conferred upon, nor confirmed to him any rights in the timber trees. The recommendation made by us as regards the sale of the royalty trees in occupied lands in Kolába is based on the principle established in these cases.

137. In conclusion we may sum up our recommendations as regards trees in occupied lands as follows:—

1*stly*. As regards royalty trees throughout the Thána district:—

(1). That the doubtful points raised in paragraph 66 be authoritatively settled as soon as possible.

(2). That all rights which Government still retain in trees of the reserved kinds be sold to occupants on condition that the material either in the form of timber or firewood shall not be exported beyond the limits of the district (paragraph 72).

(3). That Section 41 of the Forest Act be amended so as to bring the removal of forest produce from private holdings under control (paragraph 76).

(4). That throughout the district all royalty trees over nine inches in girth now standing in what are classed as *varkas* lands, and over which Government still retains full proprietary rights, should be enumerated and valued, and the occupants invited to purchase all rights which Government now possess in the royalty trees save and except the right of export (paragraph 77).

(5). That this settlement be applied also to the villages coming under the Sanján and Kolvan Settlements (paragraph 77).

(6). That if the lands in which the royalty trees are reserved to Government have not been cultivated within the last 10 years, say from 1876, on account of the tree-growth, an additional condition shall be imposed that such lands shall not be cleared for future cultivation, but be kept permanently as *shindád* land and properly demarcated (paragraph 77).

(7). That advantage should be taken of the revision survey now going on in the district to facilitate the work of enumeration of the

reserved trees in sub-shares of *varkas* land, by requiring the survey measurers to record the number of such trees in each sub-share, &c. (paragraph 78).

(8). That with the help of such record, and if necessary a small staff of survey measurers, the final enumeration of the trees and selection of lands, which, on account of thick tree-growth therein, should permanently be retained as *shindád* as a condition of the sale, be carried out by superior officers of the Forest Department deputed from other districts at slack times of the year (paragraph 78).

(9). That the price of trees should be fixed with due regard to all local circumstances by the forest officers in consultation with the Collector and that half such price should be charged to occupants (paragraph 79).

(10). That payment of the price so charged should be allowed to be made in instalments provided the whole amount is paid within six years (paragraph 80).

(11). That on completion of sale contracts, entries of the transaction should be made in the village registers (paragraph 81).

(12). That the occupants shall be allowed one year from the date of the publication of the lists in their villages within which to purchase the trees at the favourable rates (paragraph 82).

(13). That after one year, the occupants should be allowed to purchase at any time the right to the royalty trees on payment of the full price, and subject to the same condition respecting export (paragraph 83).

(14). That whenever the trees have once been cleared on behalf of Government the after-growth shall be vested in the occupants in the same way as if they had purchased the trees, subject only to the condition that the produce shall not be exported out of the district (paragraph 83).

(15). That Government should make over the trees of the reserved kinds in garden and rice lands (the latter including *pot varkas*) to occupants without exacting any payment, but should make the prohibition of export a strict condition of the surrender (paragraph 86).

(16). That a similar procedure be followed where doubts may exist as to whether trees in *varkas* lands now belong to the State or to the holders under the rules and orders applicable to such cases (paragraph 87).

2nd. As regards the trees other than royalty trees specially reserved under the Sanján and Kolvan Settlements:—

(1). That in all villages coming under the Sanján and Kolvan Settlements, the junglewood trees should be made over to the occupants free of charge, and on precisely the same condition as regards export as the royalty trees; but if considered necessary for purposes of A'bkári administration, the proprietary right of Government in the *mowra* trees should be retained (paragraph 100).

That the present rules under Section 75 of the Forest Act and Section 44, Land Revenue Code, shall in future apply only to occupants who may not accept the new settlement (paragraph 100).

3rdly. As regards all unreserved trees the rights to which were (except in the tracts coming under the Sanján and Kolvan Settlements) unconditionally parted with at the Survey:—

(1). That legislation with or without the full concurrence of the persons interested with a view to check improvident destruction of such trees is inexpedient and for the reasons explained impracticable.

That the end in view, *viz.*, the preservation of such tree-growth as a permanent supply for the cultivators' own wants, may, however, to a great extent be secured by making the continuance of the forest privileges, which occupants would ordinarily enjoy under the proposals made elsewhere, depend on the discretion they may exercise with regard to the right they now have of disposing of such trees as they please (paragraph 120).

(2). That occupants should accordingly be warned by public proclamation that if this discretion is abused and an occupant sells the trees in his land for export or manufacture into charcoal, he will thenceforth be liable to be deprived of all special forest privileges, on the ground that his action in so doing creates a reasonable presumption that he has no need of such privileges; that occupants are therefore invited to apply for previous permission before cutting trees for such purposes; that such permission will ordinarily be granted provided the applicant can show that he has a surplus stock of wood over and above his own and his tenants' or dependants' wants, and is consequently in a position not to require to draw supplies from the State forests on privileged terms; that if notwithstanding such warning he cuts for such purposes without previously obtaining permission, or in the event of such permission being applied for and refused, disregards such refusal, his name will be entered in a list of persons declared ineligible to exercise, directly or indirectly, any of the ordinary privileges in forests, except as regards grazing, which as a local resident he would otherwise be entitled to (paragraph 121).

(3). That further with a view to encourage all occupants of *varkas* lands to devote suitable portions of them exclusively for the growth of trees to supply wood and ash manure, all such occupants should be informed on the occasion of the new rates being announced in any village at the revision survey, that if at any time during the currency of the settlement they signify their intention of setting aside any part of their *varkas* land as *shindád* and agree not to cultivate that portion during the currency of the settlement, or to export or sell for export either the trees or the grass produced by the land, and to defray the cost of putting up any boundary marks that may be necessary, such area shall be measured off accordingly and the assessment thereon reduced to one-fourth of the normal amount, provided that the land in question comprises either the whole of one or more existing *phálni* numbers, or any portion or portions of an existing *phálni* number not measuring less than five acres (paragraph 130).

Lastly, as regards Kolába, our recommendations are:—

(1). That the royalty trees in occupied lands, wherever they may have still been reserved to Government, be disposed of unconditionally and once for all at the full market price (paragraph 132).

(2). That the reckless denudation of trees in occupied lands should be checked by executive action in the same way as proposed in regard to the Thána district: viz. (1) by the issue of a proclamation in the terms described in paragraph 121; and (2) by the offer of a remission of three-fourths of the assessment of all *varkas* lands which occupants may agree, under the conditions stated in paragraph 130, to reserve permanently as *shindád* (paragraph 134).

CHAPTER VII.

CLAIMS TO FRUIT TREES IN FREE GRAZING LANDS, FORESTS AND OTHER WASTE AREAS.

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CLAIMS TO FRUIT TREES IN WASTE LANDS.

Claims to fruit trees in waste lands.

The evidence shows that a large number of fruit trees, such as mangoes, jacks, tamarinds, &c., now standing in waste lands in different parts of the Thána district, are claimed as private property by the persons or descendants of persons who have planted, tended, and enjoyed the usufruct of them. The claims are based principally on old custom, and also in a less degree on inducements held out by Government in 1847 to the inhabitants to plant trees in waste places. The complaint is that these trees are not now recognized as private property, and that all entries formerly made in the village registers admitting the trees to belong to specified parties, and thus securing to them the full enjoyment of the property, were cancelled by the Collector's orders in 1881.

The complaint is alluded to in the memorial to the Viceroy [*vide* paragraphs 4*e*, 25 and 28, (12), (13)], but neither very clearly nor very prominently. As, however, it is plain from the statements of several influential witnesses that the action which has been taken in the matter has given rise, rightly or wrongly, to much heart-burning, we think it necessary to review the evidence on the subject at some length.

Evidence of former custom.

2. There is little doubt from the evidence before us that it was a common custom in many parts of Thána in times anterior to the introduction of the Survey for villagers to plant or rear fruit trees in waste places within convenient distances of their homesteads. Such trees were planted in private compounds and vacant spaces within village sites, and outside also, on the edges of tanks, and in village commons; or if not actually planted, seedlings of spontaneous growth were preserved and appropriated. In the 11th paragraph of the report of the Forest Conference of 1882 it is stated that the claims "generally refer to mango and other fruit trees growing in waste lands near a present or former village site"; and that "the custom appears to be ancient under which such trees have been planted and preserved by the villagers who mutually recognize and respect the right of particular individuals to take the produce of particular trees, in which it has not hitherto been the practice for Government to claim any share."

3. Mr. Sinclair also makes the following remarks on the origin and growth of the custom alluded to (*vide* Volume II, Part III, pages 295 and 296, reply to question 19, paragraphs 10 and 17) :—

10.—In uplands held on inferior tenures or where there was a prescription of lopping exercised by private persons or communities, there is no evidence that any one exercised a right of felling timber of any sort, but there can be no doubt that in such places the holders of the land or of the prescription protected trees against outsiders, and took in the case of trees yielding fruit and shade an amount of trouble about them which may be considered as equivalent to plantation, though the method of the country in such cases is usually rather to protect a natural seedling than to import one. Where trees were actually planted was usually in the neighbourhood of the cattle-sheds in the forest pastures. These are a positive necessity in many places, and though the right to them as against Government has seldom been allowed in settlement, the village herdsmen are still usually permitted to erect them. *As among the villagers* their occupancy is well recognized and is usually very ancient as can be seen from the size of their trees and live fences. The evidence of the trees themselves is that these processes have been continuous for many generations, until the advance of conservancy, and the action of the civil law induced many people to believe that the best thing to do with a tree was to cut it down before it was claimed by a landlord, creditor or Government, and that planting or protecting new ones was to labour for others.

17.—There is what can hardly be called a form of common planting around villages, especially about village tanks. There is no well marked association in it. Generally one person or family plants and protects a tree, the rest do no more than respect it, but they do that willingly. There were a great many petitions about such trees when I was demarcating the forests of Alibág, which in very numerous cases were in contact with the villages, being in fact the old common pastures and standing grounds which had been gazetted in a lump. The forest lands lying in such positions were all disforested and the correspondence files sent in to the Revenue Department for disposal. There was always some individual who said that he or his father had planted the tree, and would have resisted any attempt to treat it as village property. In most cases the species and condition of the tree showed clearly that it had been planted and cared for by somebody.

Recognition of private property in fruit trees in waste lands by villagers *inter se*.

4. The hill and forest lands were not, before the Survey, defined by boundaries; but certain portions were, as we know, appropriated by different cultivators from time to time both to provide ash manure for their rice fields, and for the cultivation of hill grains, and the user of such lands by certain individuals was undoubtedly recognized by the villagers *inter se*. If the occupiers of such lands planted trees in them, the trees would naturally be recognized as their exclusive property, and as any *rayat* could from time to time appropriate additional land for cultivation from the common waste, his right to plant a tree and enjoy the fruit thereof on such land would probably not have been disputed by his fellow villagers.

Inclusion of lands in which fruit trees were planted in village *gurcharans* at the survey.

5. When the Survey was introduced and the hill lands were measured, many of the trees thus planted must have been included in the rayats' separate holdings; in which case, the occupants, even if they did not, under the terms of the settlement, acquire full right of property in the trees, at least secured the exclusive usufruct of them. But many again must have been in lands which were declared waste and assigned for grazing and other purposes. It was the intention at the Survey that all the *varkas* lands in the occupation of cultivators should be separately measured, assessed and entered in their names. This intention was to a great extent fulfilled; but the evidence shows clearly that it was not completely carried out in all cases. The reasons for this are fully stated in another portion of this report in dealing with the question of *ráb* allotments. We mention the fact here, as showing how it is extremely probable, that lands formerly in the occupation of particular cultivators and containing trees planted by them, may have been in some cases treated as waste and assigned for free grazing and other purposes. Specific instances of this are given by several witnesses. This fact alone need not have caused any interruption of the exclusive enjoyment of the trees by the individual who planted them. His property in the tree would probably have been recognized by the villagers generally whether the land on which it stood was entered in his name at the Survey or not. This view is corroborated by a civil court receipt dated 1842, and produced by Thána Witness No. 28, showing, that his grandfather bought at an auction held by the court certain mango and other trees standing on the dam of the Badlápur village tank, which land is now alleged to be included in the village *gurcharan*. The same witness also produced a deed of sale showing that his grandfather bought mango trees in Devloli from a private individual about 42 years ago, and asserts that the ground on which the trees stand is now part of the village *gurcharan*.

Evidence of sales of fruit trees in waste lands as the property of individual cultivators.

Special inducements held out by Government to villagers to plant trees in waste and occupied lands.

6. There can indeed be no doubt, as above stated, that the property of individual cultivators in fruit trees planted or preserved by them, whether in appropriated upland holdings or in village commons and wastes, was and is admitted by the villagers *inter se*. We must now consider whether this custom has been in any way recognized by Government. The proclamation on which the Memorialists rely in claiming these trees was issued by the Military Board in 1847, and published for general information. The full text of this proclamation, which refers to the increasing scarcity of wood and fuel, and suggests measures to lessen the evils complained of, is given in Exhibit No. 57 (Volume II., pages 151 and 152). The passages which relate to tree planting are as follows :—

> 1*st*.—That all *zamindárs* and *vatandárs* be recommended to plant useful trees of easy growth in waste corners of their own lands and in waste corners about villages; no foreign trees or trees requiring more than common care need be planted.
>
> 2*nd*.—That those who choose to plant in their own grounds, will have the trees recognized as their own property, just as the trees now growing thereon are.
>
> 3*rd*.—That villagers, jointly agreeing to plant and take care of trees planted in village commons, shall in like manner have their property in these guaranteed to the village, so that when fit for cutting they may be sold and the proceeds applied to the common purposes of the village.
>
> 6*th*.—The above rules do not authorize villagers to acquire any *vatandári* right in the land of an absentee or other waste land capable of cultivation by planting trees thereon, as in this way much injury might be done to the interests of the State by designing persons applying for lands of this description on the pretence of planting them with trees.

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7. Further instructions to ensure the fulfilment of the intention of the above proclamation were issued to the *mámlatdárs* by the Collector in the same year (*vide* printed report of the Pendse case, translation of circular order No. 49, page 7). The *mámlatdárs* are herein instructed as follows :—

"You should know and make known to the rayats, that the belief which has gained ground in certain quarters that a tax is to be imposed upon trees is erroneous. You should also make known either by proclamation or by written orders to the people of all the villages, that if all the people of a village who use the grazing grounds or such other grounds adjoining that village in common, were to plant trees on such grounds, all the villagers will be the sole owners thereof, and that Government will have no claim whatever thereto."

Construction to be placed on the wording of the proclamation.

8. The inducement thus held out was two-fold, firstly, to individual land-holders to plant trees in their own lands and in waste corners about villages, and secondly, to village communities jointly agreeing to plant trees in village commons, or as the Collector expresses it "the grazing grounds or such other grounds adjoining" the villages. In both cases the rights to trees so planted are guaranteed to the planters, severally in the case of individual land-holders, and in common in the case of village communities. Reading the proclamation strictly it does not appear to have been intended to encourage individual land-holders to plant trees in village commons. Their right to trees planted *in their own lands* is guaranteed, but it was evidently contemplated that planting in common or waste lands should be effected by the villagers acting jointly, and that trees so planted should be their common property. In the 6th paragraph above quoted the contingency of designing persons applying for waste lands on pretence of planting them is foreseen, and it is accordingly clearly intimated that no *vatandári* rights will be acquired by planting in such lands.

9. On the other hand the people, if they weighed the words of the proclamation at all, may fairly have concluded that its terms were consistent with the custom already prevailing, and that so long as villagers *inter se* recognized trees in common lands to be the exclusive property of the individuals who planted them, it did not matter much whether the trees were called private or communal property. The proclamation in itself showed that Government did not intend to assert any rights to trees planted in village commons by the villagers jointly, and even if the planting itself were done by joint action, the villagers would almost certainly have subsequently divided the fruit-bearing trees amongst themselves, so that each individual of the community should have a separate share in proportion to his labour.

Effects of the proclamation of 1847.

10. The proclamation itself does not appear to have produced any direct effect. There is no evidence of trees having been planted in consequence of it by the joint enterprise of villagers, and it is very doubtful if individual cultivators planted trees in greater number than they did before. The popular view, in fact, is that the proclamation did not create a new custom, but simply legalized an old one, and gave satisfactory assurances that it would not be interfered with. The Forest Settlement Officer of Thána stated before the Forest Conference of 1882 that in no instance had any such claim the base of a specific grant made by Government. In the joint report of this Committee it is further observed that "Government have from time to time issued orders intended to encourage the planting of trees. A proclamation of 1847 went so far as to guarantee to village communities in aggregate the property in trees planted by the villagers jointly in common grounds, and directed that the property should be secured to the villagers jointly by a written deed. But no claim under that proclamation has been made and no record exists of its having been taken advantage of, or of the contemplated deed having been granted to any village, while the average age of the trees that are the subject of these claims is anterior to the date of that proclamation."

Vide paragraph 12 of report of Forest Conference of 1882, printed in Vol. IV., page 90.

Fruit trees in waste lands not enumerated at the Survey—Preparation of lists of such trees subsequent to the Survey.

11. The trees which are the subject of the present claims were not enumerated at the Survey, nor was any record then made of the fact that any person, claimed any such trees in waste lands. Subsequently lists of the trees were somehow prepared in some *tálukás*, and in 1874 entries were made in the village registers, either on the strength of the former lists, or as the result

of new enquiries, recording opposite certain waste survey numbers that so many trees therein were the property of certain specified individuals.

Murbád *táluka*.

12. We must now trace the history of these lists as far as we have been able to ascertain it in each *táluka*. In Murbád lists of fruit trees in waste lands claimed as private property appear from the evidence (Thána Witness No. 10, Volume II., page 23) to have been prepared in 1862-63. This witness, an influential hereditary District Officer, says the lists were made in consequence of disputes as to the ownership of the trees. The *mámlatdár* of Murbád states in his evidence (Volume II., page 26) that certain trees were entered in the tree list of 1862-63 in one Dádu Miya's name. Mr. Atkins however states (Volume II., page 252) that this *mámlatdár* was, after a protracted search in his office, unable to find that any lists relating to trees in waste lands were prepared or ordered to be prepared, and there is nothing to show whence the extract (Exhibit No. 10) produced by witness No. 10 has been obtained. He means presumably that no such lists relating *exclusively* to trees in waste lands were prepared, for we have before us lists produced by the *mámlatdár* of Murbád in which trees in waste as well as occupied lands have been entered by *talátis*. The probable explanation therefore is that the lists of fruit trees prepared under the Ellis Rules in 1862-63 with a view to disposing of the rights of Government to reserved fruit trees to occupants, enumerated not only the fruit trees in occupied survey numbers, but those in waste lands also. This view was also taken by the Forest Conference of 1882.

Bhivandi *táluka*.

13. From Bhivandi no such lists have been produced. But the *mámlatdár* (Thána Witness No. 26) states that they were prepared by the *talátis* to give effect to the Collector's Circular No. 75 of 23rd February 1866. A reference to this circular (*vide* Exhibit No. 48, Volume II, page 149) will show that the *mámlatdár* was thereby merely requested to state whether grass and the fruit of mango trees in Government forests in his *táluka* were annually sold by auction, and if not, to state the reasons and take measures in future with due regard to the interests of Government. These orders contain no direction to prepare lists of private fruit trees in waste lands, but in quoting them as an authority for so doing the *mámlatdár* presumably means that, in order to dispose of the fruit of the Government trees by auction, it was necessary to first ascertain what trees of this description belonged to Government and what to private individuals. As in the case of Murbád there is nothing to show that any such lists were ordered to be prepared or were examined or approved by any higher authority than the *talátis*.

Bassein *táluka*.

14. Similarly the Bassein *mámlatdár* (Thána Witness No. 59) can give no authority for the preparation of the lists said to have been drawn up in his *táluka*. He first quoted as the authority, evidently without due care, a circular of the Assistant Collector of 1868, which referred to trees in occupied lands exclusively, and afterwards on his mistake being pointed out to him by Mr. Atkins, wrote to withdraw his statement (*vide* Mr. Atkins' reply to question 4, paragraph 4, Volume II, page 252).

Salsette *táluka*.

15. In the Salsette *táluka* claims to fruit trees in waste lands were made the subject of a special settlement in 1864. Mr. Bell, then First Assistant Collector, disposed of such claims by taking agreements from the claimants to the effect that, in consideration of their enjoying the fruit, they should pay an annual cess of one anna per tree. The trees for which these agreements were passed were then duly registered in the names of the usufructuaries. The Conference report of 1882 described the Salsette settlement as follows :—

> "In the Salsette *táluka* where claims to such trees were instituted in 1863-64 the right of Government as proprietor of the trees was asserted by the imposition of a nominal annual cess of one anna per tree, the payment on which entitled the payer to enjoy the produce only of the tree."

The wording of the agreements shows rather that the cess was levied by Government as proprietor of the *land* on which the trees stood. The agreement (*vide* Exhibit No. 11, Volume II., page 383) runs as follows :—" I, A.B, &c., hereby agree to pay one anna annually to Government from 1864-65 and will annually pay the same accordingly in consideration of my being allowed to take the

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fruit of *my* mango tree situated, &c." The *mámlatdár* of Salsette (*vide* Volume II, page 76) appears to take the same view, when he states "still in this *táluka* whoever has his fruit trees on waste lands is allowed to enjoy the fruit on payment of one anna tax per tree. So whenever *málki* (proprietary right) is proved on a tree standing in waste lands, the one anna *assessment* is levied upon it, and the *owner* is allowed to enjoy the usufruct. The point, however, is not of much consequence, except as regards the disposal of the timber. By the agreement the holder of the tree is allowed to take the wood when the tree dies with the permission of Government. According to the *mámlatdár's* statement, the holders were until 1881 allowed to take the wood of such trees, but the wood has been sold by Government since then on the strength of the Collector's Circular No. 19 of 14th November 1881 to the effect that the right to trees follows the right to land.

Sháhápur. Kalyán.

Karjat

Máhim Dahánu. Umbargáv.

16. There is no evidence that any separate lists of fruit trees in waste lands were prepared in Sháhápur or Kalyán prior to 1874, in which year the entries as to proprietary right in such trees first appeared in the village registers. We have received no complaints from Karjat on this subject and have no evidence to show that any such claims have been made in that *táluka*. Similarly in Máhim and Dahánu including Umbargáv, there is nothing to show that any lists were prepared before 1874, or that any entries were made subsequently in the village registers, showing any proprietary right in such trees. One of the Máhim witnesses (No. 51) asserts indeed that "some people have rights to fruits trees in *gurcharan* and other waste lands in Dáhánu and Máhím" and that "such rights were recorded in Register No. 1 at one time, but the entries have since been cancelled." This witness however probably merely repeated what he had heard witnesses from other *tálukás* state, without attempting to ascertain the real facts.

Entries of proprietary rights to fruit trees in waste lands in village registers.

17. In 1874, when the village registers were prepared in the new form, a remark was made against each waste number specifying the number and description of fruit trees belonging to private persons. We find these entries in the registers of villages of Sháhápur, Bassein, Bhivandi, Salsette, Kalyán and Murbád. They do not occur, as before stated, in the registers of either Máhim or Dahánu and Umbargáv, and we have no information on this head as regards Karjat and Váda. We have now to consider, what authority, if any, there was for these entries and how they were made.

18. The orders on which these entries in the registers have been made, rightly or wrongly, were, no doubt, those quoted by Mr. Atkins in his answer to question No. 4 asking him to explain their origin (*vide* Volume II, Part III, page 252, Exhibits 6 and 7, pages 377 and 378). The first of these orders (Exhibit 7) is dated 30th March 1874. It is a memorandum of the errors discovered by the Commissioner, N. D., in examining the records of the village of Lavle in the Sháhápur *táluka*. In this he writes :—

"When I inquired why the number of trees belonging respectively to Government and the rayats had not been entered in column 20 of village form No. 1 in the case of each survey number, I was told that as the *varkas* numbers contained numerous teak, blackwood and other trees a list of them had not been prepared. When I asked the *táluka* officer (*mámlatdár*) on the subject I was informed that in accordance with my letter No. 4537, dated 23rd September 1873, the Collector issued a Circular Order No. 71, dated 22nd January 1874: that under (Collector's) Circular No. 32, dated 22nd September 1873, the Assistant Collector with his order No. 17, dated 17th January 1874, sent a list in which the sum of Rs. 983-8-0 (of which Rs. 925-11-0 was the price of trees and Rs. 57-13-0 on account of Local Fund) had been shown as credited. The *mámlatdár* added that the matter had formed the subject of a further report to the Assistant Collector and the necessary entries in register No. 1 would be made when the final orders would be received on the subject. It appears the price (of trees) was paid so long ago as in 1865-66, and so the explanation about the delay in the case is not a satisfactory one. Inquiry should now be made as soon as possible as to (1) in what survey numbers and for how many trees the payments were made, (2) whether the purchasers cut and removed the trees or not, (3) how many trees are still standing in the survey numbers and to whom they belong. Entries should then be made in village form No. 1 and I should be informed of the same fact. In village form No. 16 receipts from the produce of fruit trees were not given and when I asked the reasons for it I was told that there were numerous mango and *mowra* trees claimed by rayats and a list of such trees had not been prepared. It seems that no steps were taken either by the

táluka or *huzúr* Office to get the return prepared according to the form. Strict orders should, therefore, be issued that a list of such trees should be prepared and the produce for the current year should be filled in."

19. On the 28th of March 1874 another memorandum (Exhibit 6) of the errors discovered by the Commissioner, N. D., on his inspection of the records of the *taláti* of Kalyán, which directs that the instructions given in the case of Lavle village should be acted up to, was addressed to the Collector of Thána. It states: "No entries about trees have been made in village form No. 1. The instructions given in the *yádi* for the current year about the village of Lavle, *tarf* Korkada, *táluka* Sháhápur, should be acted up to in this case."

20. In consequence of those memoranda and the correspondence ensuing thereon circular orders were issued to all *talátis* in the following terms, under date September 30, 1874:—

Yádi No. 31 from the Revenue Commissioner to the address of the Collector, bearing Thána Collector's No. 65, Pránt No. 48 of 1874-75 and *táluka* Kalyán *huzúr* Inward No. 405 of 1874-75.

"Though it is provided in Hope's Manual of Revenue Accounts that the number of trees should be entered in village form No. 1, nobody has yet done so. Having received Pránt Officer's final order dated 19th September 1874 on the marginally noted correspondence ensued on the subject, you are informed that you should count with accuracy the number of *málki* (proprietary trees) and wells in survey numbers and enter them in village form No. 1. The rest of the trees belong to Government. This work must be completed by the end of January next."

21. Mr. Atkins points out that the orders given on inspection of the Lavle records related only to the teak and blackwood trees in occupied lands, which had been disposed of to the occupants by sale; that these were the trees regarding which entries had to be made in the registers, and that the necessity of making such entries was obvious. He refers evidently to paragraph 1 of the memorandum, which no doubt refers to trees in occupied lands only; some of which had been disposed of under the Ellis rules, and some of which, owing to their not having been purchased by the occupants, remained the property of Government.

22. His contention that there was nothing in this order to authorise any entries in the register to the effect that trees in waste lands belonged to private individuals, is, as far as we can judge from all the circumstances, well founded. He omits however to notice paragraph 4 of the same order, which points out that the revenue from the produce of fruit trees is not given in village form No. 16 and states the reason given for the omission, *viz.*, that there were numerous mango and *mowra* trees claimed by rayats, and that no list of such trees had been prepared; and further directs such lists to be made. The circular of September 1874 quoted above also directs the *talátis* "to count with accuracy the number of *málki* (proprietary) trees and wells in survey numbers and enter them in village form No. 1."

23. It is very probable that the fruit trees referred to in paragraph 4 of the Lavle Memorandum were, as well as the teak and blackwood, the trees standing in occupied lands only, and that it was not supposed at the time this order and the subsequent circular were written that there were claims to such trees in waste lands as well. This view derives further support from Exhibit No. 16, (Volume II., Part 1, page 133) which shows that the *mámlatdár* of Murbád, writing in 1873 previous to the issue of the orders above quoted, understood the direction to enter trees in column 20 of the village register to refer to occupied lands only. In a reference to the District Deputy Collector, he points out the laboriousness of the task of entering trees in survey numbers in the village registers, suggests that only fruit trees and toddy palms should be counted and entered, and that as regards all other trees they may be entered as belonging to Government, or *occupants* wherever the same have been sold to them; and that where teak and *injáili* trees are quite mixed up the former should be endorsed as belonging to Government and the latter to *occupants*. The use of the word 'occupant' here shows that the *mámlatdár* did not contemplate the entering of trees in the names of individuals, unless they were the occupants of the land on which the trees stood.

24. Again on 14th July 1874, between, that is, the orders on the Lavle memorandum, and the issue of the circular of 30th September 1874, the following

direction was given to the *talátis* of Sháhápur (*vide* Exhibit 37, Volume II., page 145, produced by the *mámlatdár* of Sháhápur) :—

"With reference to paragraph 4 of the memorandum no endorsements regarding trees have hitherto been written in village form No. 1. Details must be given in remarks column as per instructions (clause 6) below village form No. 1, but as the task of counting trees in survey numbers of forest villages would be a laborious one, wells and proprietary trees in *málki* numbers should only be counted with accuracy, and the number of such trees and wells should be entered against the numbers in village form No. 1, and the remaining trees should be endorsed as belonging to Government."

This also shows that it was intended, in complying with the instructions for filling up column 20 of the village registers, to enter therein the proprietary trees in occupied lands only.

25. The Sháhápur *mámlatdár* who produced this circular (*vide* Volume II., page 42) judges from the terms used in it, as well as from the instructions[1] given in paragraph 6 of the remark appended to village form No 1 that it is unnecessary to make entries about trees in unassessed survey numbers.

Neither he nor any other *mámlatdár* has been able to produce any other authority for the entries in question, or any other evidence explaining why they were made beyond the orders already quoted. He states his opinion that the entries were made through mistake or misunderstanding, and adds that there is nothing in the records to show that the number of trees was ever counted or verified.

26. Mr. Atkins (*vide* Volume II., pages 252—254) lays stress on the absence of any evidence showing that the *talátis* were ever authorized to make lists of fruit trees in waste lands, and on the fact that, with the exception of the special agreements taken in Salsette, an exhaustive search has failed to discover the existence of any documentary evidence regarding private property in such trees at the time the entries were made in the village registers. He further maintains that the *talátis* were never told to make entries in the registers about trees in waste lands. He thinks that on their attention having been called to the columns in Hope's Form No. 1 relating to trees by the orders quoted, they may have taken advantage of the explanations appended to the form, showing how it should be filled in, to make entries of their own accord, "without anything to guide them except the statements made by or the inducements held forth to them by the people who claimed the trees."

27. Mr. Mulock in his letter No. 1594 of 15th May 1886 to Government, copy of which has been furnished for the information of the Commission, takes a similar view. He maintains that the action of the *talátis* in making these entries in the registers "was illegal, because under the Forest Act the Forest Settlement Officer alone had authority under the law to investigate claims to forest produce in such lands," and that the *talátis* were directly anticipating the Forest Settlement Officer's inquiry and tying his hands; and further that their action was irregular in that it was contrary to standing orders. He quotes the instructions for filling up column 20 of village form No. 1 given in Hope's Manual and writes :—

"It will be seen from the above, that no change is to be made in the register for the 30 years of the settlement, and the *taláti* has absolutely no authority to make entries therein excepting to record *transfers* of occupancies and of miscellaneous rights or of *sales* of reserved rights on getting in each case an order for the entry from the *mámlatdár*. An entry in this register stands for ever, and as a Collector even I would hesitate to make an entry in such a record without an order of Government or of the civil court. As a matter of fact, I never have made an entry to my recollection in the document recording either State or private rights. To allow a low paid class of subordinates like *talátis* to make entries therein without orders and without even the guarantee of their signature renders the record unreliable and worse than useless. It may also be noted that entries thus made become in a few years quite undistinguishable from the original and trustworthy entries of the Survey Department made when the form was originally prepared."

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[1] Column 20 will contain notes as to what rights in wells, houses, date, teak or fruit trees, &c., have been reserved to Government, or are the property of the occupant. Should reserved rights be afterwards sold, the *taláti* or *kulkarni* will make an endorsement to that effect on receiving authority from the *mámlatdár*.

28. We have no clear evidence as to the exact dates on which these entries were first made in the registers in the different *tálukás*. But if, as we infer, they were made, when attention was called in 1874 to the question of filling up column 20 of the village registers, Mr. Mulock's argument that no one but Forest Settlement officers had legally any power to investigate such claims is evidently untenable. Forest Settlement officers derive their power from Act VII. of 1878, and were not in existence in 1874, and the lands in which these trees are growing were not included in forests until the 31st March 1879. Had such entries been made in the village records by the Survey officers their legality would not, we presume, have been questioned. The only reason for doubting their accuracy and genuineness seems to be that they were made by low paid Revenue officers without direct authority, and apparently without any check or supervision. It is certainly an extraordinary circumstance that between 1874, when the entries were presumably made, and 1881, when they were first discovered and cancelled, no reference for instructions as to whether the trees in waste lands were to be entered in column 20, as well as trees in occupied lands, should have been made either by the *talátis* to the *mámlatdárs*, or by the *mámlatdárs* to higher authority. It is equally extraordinary that the entries now declared unauthorised or irregular, should not have attracted the attention of the various officers whose duty it was to examine village accounts during this same period.

29. Although it is clear from the evidence that the *talátis* were never directly authorised or instructed to make these entries, or investigate claims of this nature, we do not think any sufficient reason has been shown to warrant the imputation that thay were made in bad faith, by an entire body of public servants acting in collusion with claimants in all parts of the district, and that advantage was knowingly taken of the ambiguity in the orders regarding the filling up of column 20 of the register, to secure by fraudulent means evidence of proprietary rights in trees, to the usufruct of which the persons interested had no *bonâ fide* claims. The District authorities, as it would now appear, were probably not aware that people claimed fruit trees in waste lands, and clearly did not contemplate that such claims should be investigated and decided by village accountants. But the latter must certainly have known of the old custom of planting trees in village commons and other waste lands, and of the full recognition by the villagers *inter se* of the exclusive rights of individuals in such trees, and may fairly have presumed that the custom was equally well known to and acquiesced in by their superiors. They may have thought in good faith, but in ignorance of the legal maxim, *quic quid plantatur solo solo cedit*, that to enable them to dispose of the fruit of trees in waste lands belonging to Government, it was first of all necessary to ascertain what trees in such situations were already in the possession of the villagers. The fact of any villager having taken the fruit of any particular tree, since it came into bearing, would have been notorious, and they had at that time at least no grounds for supposing that the possession of such trees according to old established custom was disputed by Government. It is unfortunate that the custom escaped the notice of the higher Revenue officers from the introduction of the Survey up to 1881, and that the claims of the people were not investigated *ante litem motam* in a manner more likely to inspire confidence in the record, than that actually adopted. But however irregular the entries in the register were, we see no reason to think that they were made otherwise than in good faith.

30. The entries did not, as before remarked, attract attention until 1881. In that year a reference was made by Government to the Advocate General as to whether the enjoyment of the produce of trees on Government waste lands by custom or under a lax system amounts to a recognition of right which the Forest Department must respect. In replying to this the Advocate General wrote as follows:—

"It is a maxim of law that *quic quid plantatur solo solo cedit*, and consequently whatever is affixed or planted in the soil becomes subject to the same rights of property as the soil itself. Therefore, if a man plants a tree in Government land, the tree so planted becomes the property of Government as much as the soil itself, and the planter has no right thereto or to the branches or produce thereof. A claim to enjoy the produce of trees on Government waste land is what is legally termed a claim to a *profit à prendre in alieno solo*, and it is clear no such right can be claimed by custom either by one individual or by a class of

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individuals, for such a custom is bad in law. Nor can such a claim be made by any individual on the ground of uninterrupted enjoyment of the produce of the trees for many years, *i.e.*, by prescription, for prescription runs not against the Crown. No such claim can be made save under a special arrangement or agreement with Government or its officials that the claimant should take the produce of the trees. I (Advocate General) consequently answer the first question in Mr. Under Secretary's letter as follows:—That an enjoyment of the produce of trees on Government waste lands by custom or under a lax system, does not amount to a recognition of a right by Government which the Forest Dapartment must respect."

31. This opinion was circulated by Government for general information and guidance in their Resolution No. 6550 of 3rd November 1881. It had no special reference to the Thána claims, but the attention of the Collector of that district appears to have been called to them independently about the same time. In forwarding a translation of the above Resolution to the *mámlatdárs* (*vide* Exhibit No. 49, Volume II, page 149) he remarked :—

"Reports have been received from several places that Government assessed or unassessed waste lands, which are proposed to be given out for cultivation, contain proprietary trees planted by the rayats. This cannot be admitted. The contents of the Resolution quoted above should be carefully studied and acted up to. No one has any right to take produce of fruit trees for which no rent is paid to Government, and which are in the land belonging to Government and not in the occupation of any person. The fruit of such trees is to be annually sold by auction and the proceeds credited to Government. This should be acted up to."

Vide Mr. Mulock's report to Government No. 1594 of 15th May 1886, paragraph 8.

32. A month later, *i.e.*, on the 21st December 1881, the Collector addressed the District Deputy Collector as follows :—

"I have the honour to point out that I found, when doing the *jamábandi* of Panvel, that many *talátis* had made entries in Hope's Form No. I regarding trees claimed by private individuals in the *gurcharan* and other Government waste lands. It is not customary for such entries to be made regarding such lands, and the *mámlatdár* should have seen that these entries were not made without his permission. The entries should now be erased and no such entries allowed in future."

33. The correspondence on the subject of Jáffar Lothan's petition produced by the *mámlatdár* of Murbád seems to show that the existence of these entries was first discovered by the Collector in the Panvel *táluka*. The inquiry into this petition resulted in further special orders being given for the erasure of all such entries.

Vide Vol. II., p. 28 and Exhibit 17, Vol. II., p. 138.

34. We have traced above, as fully as it can be ascertained, the history of these claims, and have shown how they have been dealt with by the local authorities, acting presumably under the general principles of law as explained by the Advocate General. Mr. Mulock states in the 13th paragraph of his report already referred to that "whatever rights and claims the people had or imagined they had, remained untouched," by his orders (*i.e.*, by the cancellation of the entries in the village registers). "All I objected to" he writes "was having my records tampered with by low paid subordinates open to corruption, and whose entries were no doubt purchaseable by claimants. Had these people proprietary rights they were at full liberty to prove them before the Forest Settlement officer, the Revenue officers, or in the civil courts, on the grounds of prescription or customs, but not on the grounds of their having been conceded by authorised Government officials, when those officials were unauthorised *talátis*." It is no doubt true that the mere act of erasing these entries in the village registers could not legally extinguish any rights otherwise capable of being established, but it is clear from the evidence that the consequences which followed this action, were such as would necessarily prejudice the claimants in asserting their rights, if they had any. If the entries were unauthorized the Collector may have been justified in repudiating them, but the evidence shows that his intervention was not limited to a simple repudiation of an admission of right in a public record. The statements of Thána Witnesses Nos. 28 and 45 show that not only was the right of Government over these trees asserted by selling the fruit and timber, but that people were prosecuted and fined for exercising similar acts of ownership. The results naturally provoked complaints and

caused dissatisfaction. Considering the antiquity of the custom of planting trees in unappropriated waste lands, the special inducements held out in 1847, which may reasonably have been construed as an acknowledgment of the existence of such a custom, and an encouragement to continue it, and the action of the Survey, whereby many lands formerly appropriated by villagers for *ráb* purposes and dry-crop cultivation were treated as waste commons, we do not think the entries in the village register in support of the claims, unchallenged as they had been for so many years, should have been summarily cancelled without at the same time taking steps to institute careful inquiries as to the origin and grounds of the claims.

35. It has to be noted also that these claims to fruit trees in waste lands have been very differently treated in the Thána and Kolába districts. In Thána all rights in such trees have, it appears, been disallowed in the inquiries into claims made under Section 6 of the Forest Act, in the absence of any evidence as to special grant, and on the general ground that a *profit à prendre* in another's soil cannot be claimed by custom. Mr. Keyser's evidence (*vide* Volume II., pages 300 and 301) shows that the authorities in Kolába have taken a different view of the matter. He has found only one instance of the right of individuals to fruit trees in waste lands being recorded in the survey registers. But he adds "these rights are however freely recognized by the authorities, and in one case (in Madhali in Roha) I gave such rights to mango trees along the side of a road to the fort of Avchitgad, which there was evidence to show, had been planted by a private individual in a forest number, on an appeal from the Forest Settlement Officer. In another case the Forest Department surrendered a mango tree felled in a number gazetted as proposed reserved on the owner showing his right to its possession. As a rule the people enjoy the right in these fruit trees unquestioned and recognize among themselves individual rights. When a man wishes to fell one of these trees, it becomes a question for inquiry and is decided on its merits."

36. The usufruct of the trees which are the subject of the claims has been recently restored to the people generally by a circular issued on the 12th December 1884 (*vide* statements of Thána Witnesses Nos. 18, 26 and 28) with a reservation that as the proprietary right in the trees vests in Government, they shall not be cut down. By the orders on the Forest Settlement reports (*vide* Collector's circular of 30th October, Volume IV., pages 191 to 196) the inhabitants of villages in which forests are situated are also permitted to collect free both in Reserved and Protected forests all wild fruits and minor produce except myrobalans, *shikekái* pods, *mowra* flowers and *ápta* and *tembhurni* leaves. Whether the fruit trees claimed as private property are within or without forest limits there is now, therefore, nothing to prevent the claimants enjoying the produce. But they are not allowed to cut down the trees or to dispose of the timber when the trees die.

Recommendations for settlement of claims

37. We think the most satisfactory course now open will be to deal with these trees in all other *tálukás* of Thána and Kolába on the principle which has already been adopted in Salsette. We would register all fruit trees in waste lands which were formerly entered in the village registers, and may be found to be still in the *boná fide* enjoyment of individual cultivators, in their names, as the holders and proprietors thereof, and would, as is already done in Salsette, levy the assessment of one anna by way of ground rent for the space occupied by each tree so registered whether bearing fruit or not. We would admit no claims to such trees, unless previously recorded in the registers, but would treat the cancelled entries as the best evidence of usufruct, and not go behind these unless there might appear special reason to suspect fraud. The registered holders should be at liberty to take the produce of the trees. They should also be allowed to cut down the trees and dispose of the timber at their pleasure. But they should be required to give notice of such intention in order that the necessary corrections may be made in the registers, and the assessment struck off. It should be clearly notified at the same time that all claims to such trees must be presented within a certain reasonable time, and that no rights will be admitted to any trees in waste lands which are not thus registered and assessed, and that no future rights will accrue from planting new trees in waste lands, unless special permission be in each case previously obtained; and that on the death or removal of

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the trees, all interests of the holders in the land covered by the trees shall cease. The agreements already executed in Salsette need not be interfered with. But we would recommend that permission to take the wood of the dead trees should as a matter of course be given. In the remaining *tálukás* agreements should be taken embodying the terms above proposed, as a condition precedent of the registering of the trees and the admission of title.

38. The settlement we propose will, we believe, be cheerfully acquiesced in everywhere, while the Salsette people will have no grievance left in this matter, if they are allowed as they were prior to 1881, to take the wood of the dead trees. Judging also from the case of Salsette where an annual sum of Rs. 765-9-0 is now levied on the 12,249 registered trees, the proposed assessment in other *tálukás* will also yield a fair revenue for some years to come, which there is no good reason for Government to forego.

39. All rights in these trees will under the settlement proposed disappear with the death or removal of the existing trees. No permanent inconvenience can therefore in any case arise from the recognition of private property in them. Moreover it will be found, we believe, that with very few exceptions, the trees claimed are situated in lands which are or will be, when the demarcation is completed, excluded from forest blocks. As the people now enjoy the privilege of collecting free all such fruits, as mango, tamarind, &c., from trees now in Reserved and Protected forests, both open and closed, we can foresee no more inconvenience in registering the few trees that will be claimed in forests in the names of individual claimants, than would be the case if the trees were in other waste lands not included in forests. The only difference would be that the assessment would be credited in the one case to the Forest Department, and in the other to the Revenue Department. But if in any special case, the continuance of the exercise of the right over any trees in forests is found to be undesirable, all interests in the trees could be easily bought up on payment of reasonable compensation.

CHAPTER VIII.

RULES UNDER SECTION 41 OF THE FOREST ACT.

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RULES UNDER SECTION 41 OF THE FOREST ACT.

Amendment of Section 41 of the Forest Act necessary in the interests both of Government and private owners of forest lands.

In order to make any system of conservancy of the State forests really effective, and to protect the interests of private owners of wooded land as well as Government, it is necessary to vest the executive authorities with power to control, while in transit, all forest produce for which there is an export demand, whatever may be the source from which it is obtained. This control is specially needed in districts such as Thána, where in addition to the State forests there are large areas of private forests, and tree-covered holdings, from which timber is exported in great quantities to Bombay and other places. Section 41 of the Forest Act provides for this control, but the scope of the rules framed under it has been so limited by the interpretation* put upon the phrase "timber and other forest produce" used in that section, that the plunder of wood from Government forests can now only be prevented by guarding the forests themselves. For directly the plundered material has been conveyed outside the forest boundaries it can be passed off as the produce of some private holding with little risk of detection.

* Government Resolution No. 5210, dated 12th July 1883.
Government Resolution No. 469, dated 18th January 1884.
Government Resolution No. 2664, dated 28th March 1884 (paragraph 2).

Results of previous proposals for amendment.

2. We are aware that the local officers and the Government of Bombay saw as early as in 1884 the necessity of amending Section 41 so as to make it applicable to all forest produce, the transit of which it may at any time be thought necessary to bring under control, irrespective of the source from which it may come. The Government of India, however, did not see their way to give effect to the recommendation of the Bombay Government so soon after the passing of the Forest Act. In paragraph 2 of his letter quoted in the preamble of Government Resolution No. 9256, dated 22nd November 1884, the Secretary to the Government of India in the Home Department stated :—"In reply, I am to state that the Governor General in Council, after careful consideration, has come to the conclusion that it is inexpedient to undertake any amendment of the Indian Forest Act at present. Any legislation of the kind would involve the opening up of many wide and difficult questions, which had much better be left untouched. His Excellency in Council is of opinion that the land transport of forest produce should not be interfered with more than is absolutely necessary to protect important interests, and that the true principle to follow is to protect and guard the Government forests themselves. There may be difficulties in the application of this principle to parts of the Bombay Presidency, but these will, no doubt, be met, as far as possible, by executive arrangements."

Opinions of official witnesses.

3. We attach however very great importance to this point, as we are firmly convinced that the power to control in transit the produce of private holdings is an indispensable condition of any satisfactory settlement of the many difficulties experienced in the forest administration of the Konkan districts. From the answers to our circular question (No. 46) on the subject (*vide* Vol. III., pages 122 to 124) it will be seen that a large majority of the officers consulted share our opinion that Section 41 of the Forest Act needs amendment. Our personal inquiries also lead us to believe that the rules, as they now stand, are useless to check the removal of smuggled wood, and that this fact alone has greatly facilitated the commission of extensive thefts of timber from the Government forests of Thána within the last two years. From among the opinions to which we have referred, we quote here the remarks of Messrs. Wilkins and Mádan, both Forest officers connected with the management of the Thána forests :—

Difficulties of forest administration in the absence of power to control the produce of private forests while in transit.

"Mr. Wilkins.—'The rules under Section 41 of the Forest Act should certainly, in my opinion, in such an extensively wooded district as this (Thána) where the State forests are so much interlaced with occupied and private lands, be made applicable to all timber and such kinds of minor forest produce for which an export trade exists, cut or collected in occupied lands. Without these rules it is impossible to protect the forests. A person owning lands adjoining the State forests can with the greatest ease, unless of course a cordon of guards is placed round his field, which needless to say is impossible, rob the forests to any extent; all he has to do is to say the material has been cut in his lands and to have certain stools of similar dimensions ready as proof of the wood having been cut on his land.

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By similar tactics much of the dead-wood is removed from the forests and a scarcity of this article is thus created for the rayat. What dealers do is to station their agents in the vicinity of the various outlets of the forests, who, directly their carts, which probably have been sent into the forest the night before, come out of the forests laden with wood issue a pass commonly called a *dákhala* which states that the wood has been brought from *málki* lands. With these facilities for robbing open to them, and knowing full well the difficulties we have to contend against in proving successfully any dishonesty on their part and bringing them to justice, they simply do as they like. The local officials are also fully alive to this and are in silent collusion with the dealers, who naturally make it worth their while to maintain a silence and close their eyes to any dishonest practices. Under the ruling of the Remembrancer of Legal Affairs transit passes are not required for timber and other forest produce if they are produced in occupied lands. The result of this has been, as I have pointed out above, to open another and simpler road by which the forests of the State may be robbed. The rules as at present worked are simply a farce and a dead letter. They are moreover not of the slightest use for the protection of the forests, and unless they can be enforced properly they may just as well be cancelled entirely.'

"Mr. Mádan.—'There is pressing need for such legislation. A control somewhat similar to what is at present exercised over *varkas* lands coming under the Kolvan Settlement should be authorized over all occupied lands in the Thána District by amending Section 41. Also the former system of passes to cover such timber and other forest produce in transit under Section 41 should be reinstated. The advantages to arise from this change will be manifold. At present a rayat is easily allured to sell trees in his holding by a timber dealer offering him rather high prices. The object of the dealer in doing so is to commit depredations on the adjoining Government forests under cover of a few trees purchased by him from the rayat. As the restriction for *málki* passes is now removed, thefts in Government forests are every day becoming more and more extensive and uncontrollable. Although Government maintains that it is a better policy for the Forest Department to guard the interests of Government by strictly protecting the Government forests themselves than by interfering with the transit of private timber, it is a policy which has entirely failed in practice to secure the interests of Government. As I can vouch from my personal experience controlling the *málki* wood will not only save Government forests from being robbed, but it will be highly beneficial to the rayats themselves. For it will save occupied lands from being denuded and thereby secure the people a larger supply of timber, *ráb* material, &c., and it will also save Government from the present embarassment of the people looking to the Government forests for their supplies, and besides, forest conservancy will be highly facilitated.'"

These extracts show very forcibly the difficulties which have now to be contended with in a forest district with a large export trade and exceptional facilities for carriage of forest produce by rail and water.

4. The forest history of the Konkan districts shows that the necessity of imposing some such check against illicit transport of wood was always recognized, and that the export of timber from private estates was in actual practice controlled as far as possible under a pass system. Thus in 1840, when recommending reforms in the arrangements for levying the 'Kolai' tax, Mr. Pelly recommended that the export of wood from private lands should be covered by certificates from the Land Revenue Collectors and *mámlatdárs*. Dr. Gibson's rules also made it obligatory for proprietors of private estates to obtain permission before cutting timber. In 1862 Government approved of Captain Bingham's proposal to the following effect:—"All timber of every description passing through the country, except covered by a permit originally issued by the Forest Department, will be subject to detention for enquiry; passes should be issued to all holders of *inám* and other lands on application to the *mámlatdár* of the district at Re. 1 per 100 or one anna per 10; all passes should be given up to any one appointed to receive them." The necessity of strictly controlling the transit of wood from private lands was also repeatedly urged by the local officers from time to time. As an instance we may refer to the precautions adopted by Mr. St. J. Gordon, Collector of Thána, and the representation on the subject made by the Conservator of Forests alluded to in paragraphs 35 and 36 of Chapter VI of this report.

The proposed amendment is needed to safeguard the abuse of privileges in forests granted to local residents.

5. Apart, however, from the more effectual protection both of Government and private property which will be secured by the proposed amendment, there is another very special and important reason why the Executive Government should be vested with power to control the removal of the forest produce of the occupied lands in the Konkan districts. Both in Thána and Kolába it is found necessary to grant extensive privileges to the agricultural population as regards the supply of wood and *ráb* materials from Government forests. The justification of these privileges rests mainly on the assumption that the supply available from

private sources is insufficient to meet the local demand. In order, therefore, to ensure that the privileges allowed by Government are not abused, an efficient control over the transit of timber from private lands is absolutely necessary. In fact all our recommendations as regards local supply in Chapter IV., and as regards the disposal of reserved trees in occupied lands in Chapter VI., are based on the assumption that it will be possible to regulate the removal of wood from private lands under Section 41 of the Forest Act. We therefore strongly recommend that, for the reasons given above, the Government of India be moved again to reconsider their decision. If that Government should still see difficulties in the way of amending the section as originally suggested so as to include *every* description of forest produce removed from private *lands*, it is hoped they will at least see the very urgent necessity of bringing under control the removal of timber (as defined in the Forest Act) from such lands.

Alteration required in the wording of Section 41 to secure the end in view.

6. In his answer to our circular question No. 23 (*vide* Vol. III., page 68), as to the best means of preventing abuse of the privileges granted to local residents, Mr. Atkins writes :—

"There are in my opinion four practical measures the adoption of which would effect the desired object, but all of which consist of altering sections of the Indian Forest Act. These are :—

"(1). Giving a new definition to 'forest produce' by striking out the words 'when found in or brought from a forest' from the definition now given in Section 2 of the Indian Forest Act."

"(2). Defining 'forest' as 'any land on which trees grow.'"

"(3). Making Section 41 of the Act relate to 'all tree produce' whether it happens to be forest produce or not."

"(4). Altering Section 39 (*a*) of the Act by striking out the words 'in respect of which Government has any right' and then imposing a sufficient export duty on all timber which is not proved by means which Government considers sufficient to be timber in respect of which Government have no right."

Any one of the first three amendments suggested by Mr. Atkins would secure the end in view, but in our opinion the following alterations will effect all that is necessary :—

1. For the words "as well as the control of all timber and other forest produce" in Section 41 read "as well as the control of all timber, whether forest produce or not, and other forest produce."
2. Omit the word 'other' used before 'forest produce' in Clauses (*a*), (*b*), (*d*), and (*e*).

Complaints of the lease-holders of Salsette against the working of the rules under Section 41 of the Forest Act.

7. We have received only one complaint against the operation of the existing rules under Section 41, *viz.*, that from certain lease-holders of Salsette and *inámdárs* of Máhim. The grievances of these gentlemen, who enjoy full forest rights with regard to their properties under the terms of their leases or grants, have been explained to us by their representative, Mr. Kharsetji Hormasji Dádishet, whose evidence on the subject has been duly recorded (*vide* Vol. II., pages 248 and 249). We find that these same lease-holders complained in 1883 to the Government of India against the application of the rules to their forests. The objections then raised by the Memorialists appear to have been completely met by the reply of that Government quoted in the preamble to Government Resolution No. 5210, dated 12th July 1883. The same points among others have been again raised before us. We are of opinion, with regard to these points, that the answer of that Government ought to satisfy the Memorialists. The other points raised mostly relate to minor details of no great importance. We will however briefly notice the several points and propose a slight relaxation in the present rules, which will, we think, remove all reasonable grounds of complaint.

8. The points raised are :—

(1.) That the procedure laid down in Chapter VI. of the Forest Act for acquiring private forests for public purposes is objectionable.

(2.) That the rules under Section 41 of the Act should not be made applicable to the lands and forests owned by the Memorialists.

(3.) That the Memorialists may be allowed to prepare their own pass-books according to the prescribed form, and to bring them to be stamped at

the forest offices, instead of being required to purchase them from the Forest Department.

(4.) That a sufficient number of passes should be issued at a time, so that there shall be no hindrance or stoppage in the work when the passes have been used up.

(5.) That the limit of time now fixed within which the unused passes are to be returned is too short.

(6.) That the fee leviable under Rule 16 on all wood stored at a depôt is objectionable, as it is tantamount to a duty which is in violation of the terms of the freehold leases.

(7.) That for the same reason the fee leviable for the registration of property-marks is objectionable.

(8.) That the rule which requires a separate pass to be issued for each bullock-load of forest produce is inconvenient and troublesome.

(9.) That the depôts should be kept open night and day.

(10.) That no particular routes should be specified for the removal of timber, &c., under Section 41.

9. Points 1 and 2 have in our opinion been completely answered in paragraphs 2 and 4 of the letter of the Government of India quoted above and they do not call for further notice at our hands. The grievances under heads 6, 7, 9 and 10 are, as far as we can judge, purely imaginary. The *vivâ voce* examination of Mr. Kharsetji Hormasji Dádishet (pages 248 and 249 of Vol. II.) shows that no practical inconvenience has been caused to the Memorialists by the operation of the rules of which they complain. The fees under Rule 16 are only leviable from persons *voluntarily* availing themselves of the convenience afforded by the depôts. No fees have been levied for the registration of property-marks. Mr. Wilkins, the Divisional Forest Officer of Thána, informs us that "all forest depôts are kept open at night, and that for this purpose the depôt officers receive contingent money to provide themselves with lights." Mr. Dádishet himself is unable to say from his personal knowledge that any actual inconvenience has arisen from the present arrangements. Should such be the case hereafter, it will be the duty of the Forest Department to remove it. In the Appendix to the Rules, certain routes and bunders which are well known to attract traffic in timber, &c, are specified, and, in order to meet special cases, Government have sanctioned a modification of the rule as it originally stood by the addition of the words "or by such routes as may be entered in the pass by the Conservator of Forests or by any officer of Government authorized by him in that behalf." As a matter of fact when Mr. Dádishet wanted to ship his wood from Shimpavli bunder, the Conservator allowed him to do so under the authority vested in him by this amendment of the original rule. The rule as it now stands enables the Conservators to make all reasonable arrangements for the convenience of exporters and requires no alteration. It offers no serious hindrance to the timber trade, while it obviates the necessity of establishing depôts on every possible export route in a district.

10. The Memorialists ask to be allowed to prepare their own pass-books. Mr. Shuttleworth, whose opinion on the point we particularly solicited, is in favour of upholding the existing plan (*vide* Vol. II., page 277). Some of us were at first inclined to think that there would be no serious objection to the *inámdárs* and lease-holders being allowed to get their passes printed in the cheapest way they can, and that the provision of the rules for the passes to be duly stamped by the Forest Department would be a sufficient safeguard against the use of unauthorised passes; but on further consideration of the matter we are of opinion that for the sake of uniformity it is better to adhere to the present plan. The price to be charged for such pass-books should, however, never, we think, exceed the actual cost. At present eight annas are charged for a book containing 100 passes. Mr. Dádishet says he could get the same number of passes printed for about three annas. The Conservator does not state what the cost-price of these books is, but says that at present a very small additional charge

is made upon the actual cost-price of the books to cover the expenditure upon postage, establishments, and the other expenses incidental to the pass system. As it is of great importance, in the interests of Government forests, that the holders of private forests should be encouraged to conform strictly to the pass system, we think the burden falling upon them in the shape of the cost of the passes should be made as light as possible.

11. Under the fourth head the Memorialists ask that a sufficient number of passes should be issued so as to prevent hindrance to traffic. Mr. Dádishet produced before us some papers bearing on the complaint, from which we gather that when the system was first introduced the passes were not issued in sufficient numbers and promptly enough in some cases. This however was evidently due to the imperfect knowledge of the system on the part of the subordinate officials. Now that the rules are everywhere well understood, inconvenience from this cause is no longer likely to occur.

12. Mr. Dádishet further asks that the pass-books should not be made returnable at least till the end of the season. We see grave objections to fixing any such hard-and-fast rule. The limit which may be desirable in the case of any extensive felling may be quite unnecessary, when only small cuttings are to take place. In a matter of this sort much must be left to the discretion of the officer issuing the passes. Our opinion in this matter entirely coincides with that expressed by Mr. Shuttleworth. He says he would leave the matter to the discretion of the Divisional Forest Officer, "who should endeavour to serve the convenience of the *inámdár* as far as other considerations affecting the point would permit him to do so." That their convenience is consulted in this manner has been shown by the production of some pass-books which were made returnable in June, that is, after the close of the season.

13. Lastly the Memorialists complain that separate passes should not be required for each bullock-load. Mr. Shuttleworth thinks they are very necessary and gives cogent reasons in support of such a view (*vide* Vol. II., page 277) We have given the matter our best consideration. The trouble and expense of writing separate passes, especially where, as in Thána, a considerable quantity of the material is conveyed by pack bullocks, are great, and it will greatly tend to popularise the pass system, if the labour of issuing separate passes is minimised as much as possible. The objections to issuing passes for groups of conveyances are insuperable in cases of long journeys, but we are of opinion that the inconvenience complained of would be very sensibly diminished, if not entirely removed, by vesting the officer issuing passes with discretionary power to give one pass to cover any number of bullocks, horses or donkeys not exceeding 50, for journeys not exceeding 15 miles. If the actual experience gained hereafter shows that further relaxation of the rule may be allowed consistently with the efficient working of the system, it will be very easy to modify the rule further.

14. There is one more point in connection with these rules which deserves notice. Under Rule 13 the Conservator of Forests can authorise any person who is an owner of timber or other forest produce, or the agent of any such owner, to issue passes under Rule 3. The Memorialists in their petition to the Government of India in 1883 prayed that it might be made obligatory on the Conservator to issue pass-books to them or to their *contractors*. With reference to this request the Government of India observed as follows:—"It is for the interest of the Forest Department readily to grant the requisite authority to all respectable and reliable owners of private forests, or their agents, for the issue by them of passes to cover the produce of their forests while in transit; but it is necessary that the Conservator of Forests should be invested with discretionary power in the matter, so as to prevent the issue of such passes falling into the hands of unscrupulous persons. The Governor General in Council is confident that, under the orders of the Bombay Government, every facility will be afforded by the Forest Department to the owners of private forests and their agents for obtaining the passes in question, and the details of any arrangements which may be sanctioned by Government for this purpose should receive the widest possible publicity so as to leave no room for doubt on the subject."

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15. It will be seen that while the Memorialists asked that their contractors should be authorized to issue passes, the Government of India very properly ignored the contractors, and suggested that the requisite authority to issue such passes be granted to all respectable and reliable owners of private forests or their *agents*. The correspondence produced by Mr. Dádishet for our perusal and his reply to question 8 on page 249 of Volume II., show, however, that contractors who have purchased standing timber from *inámdárs'* forests have in some cases been allowed to issue their own passes. We consider this practice open to very grave objections. The passes are intended as a check against the surreptitious removal of wood by contractors and others engaged in the wood trade. The real object of the pass system may be completely frustrated by entrusting the work of issuing passes to contractors, instead of limiting it to duly authorised Government officials and respectable and reliable owners of private forests or their agents. Mr. Dádishet argues that when once he has sold the wood to the contractors, he has no longer any interest in it, and that under Rule 13 the owner of timber for the time being, who in this case is the contractor, can alone be authorised to issue such passes. If the strict wording of the rule be considered, there is some warrant for this contention; but there can be no doubt that the intention of the rule was exactly in accordance with the view of the Government of India as expressed above. If an *inámdár* or the owner of a private forest cuts and exports timber, it is reasonable that his convenience should be consulted, and that he should be allowed to issue passes himself to cover the timber in transit, instead of being put to the great trouble of applying for a separate pass for each load from the Forest officers. A similar concession can also be reasonably made in favour of any respectable agents he may duly authorise in this behalf. But if he sells the standing timber to a contractor, and thus divests himself of all further responsibility as regards its removal, there is no reason why his vendee or vendees, whoever they may be, should be vested with similar powers to issue passes. In the one case the position of the *inámdár* may afford a good guarantee against any abuses of the pass system. In the other case there is no such guarantee. If such powers are given to wood merchants at all they should only be given to them as the duly authorised agents of the *inámdárs*, and not independently. We recommend therefore that the wording of the rule be changed so as to leave it discretionary with the Conservator to authorise only the owners of private forests and their duly constituted agents to issue such passes. We are also given to understand that contractors having dealings with the Forest Department are occasionally authorised in the same way to issue their own passes. This practice also appears to us to be equally open to objection.

Proposed amendment of Rule 13 under Section 41 of the Forest Act to limit the delegation of authority to issue passes to owners of private forests and their duly authorised agents.

CHAPTER IX.

FOREST OFFENCES AND ABUSES OF PRIVILEGES.

No system under which any privileges are granted in forests in favour of the local population, or any classes thereof, can be considered complete, unless adequate safeguards are provided to prevent abuses. Casual breaches of forest regulations can of course be punished according to law when the offenders are discovered. But the remedy thus provided is not sufficient to meet cases where whole villages or whole sections of the population systematically combine to set regulations at defiance, or take advantage of privileges given to enable them to satisfy their own *bonâ fide* wants as cultivators, to trade in material so obtained; nor will it prevent such privileges being directly or indirectly enjoyed by persons for whose benefit they are in no way intended.

2. The subject is a very important one in Thána. Liberal forest privileges are necessary in this district, not only because the population has been so long accustomed to them, but because the area of private forest is, under the existing distribution, very small in comparison with the area of public forests. At the same time, owing to the great facility with which forest produce of all kinds can be exported from most parts of this district by land and sea, there are exceptional temptations and opportunities to abuse and evade privileges and regulations. The same opportunities exist in parts of the Kolába district though in a less degree than in Thána.

3. We must here call attention to the various opinions* elicited by us on this subject both from the official witnesses and the Thána Association. We do not propose to examine these opinions in detail, but may observe that we have given the fullest attention to the arguments and suggestions contained therein.

* *Vide* Volume II., Part III., pages 338 to 342;
Volume III., pages 66 to 76;
Volume III., Appendix J., page 154.

Forest offences

4. We will consider first the chief forest offences which are likely to occur under the system advocated in Chapter IV of this report for the supply of all kinds of forest produce, and the regulation of grazing and other privileges. We include under this head all *irregular exploitation* of forests contrary to regulations, and wilful firing of forest reserves, either with the deliberate intention of increasing the supply of dead wood, or of causing grass to sprout during the dry season. Mere abuses of privileges such as trading with wood obtained at favoured rates for *bonâ fide* personal consumption may cause a loss of legitimate revenue without any real injury to forest conservancy. But acts such as those described above make proper conservancy impossible, and do lasting harm to the forests.

5. By the proposals made in section II, Chapter IV, the demands of the local residents for timber and firewood for home consumption from the State forests, will be met in future entirely from the periodical fellings of compartments marked off for that purpose. Under this system no acts of irregular exploitation will be permitted in the forests, except (1) the lopping of certain trees and shrubs for *ráb* and fencing by forest villagers, (2) the cutting and removal of bamboos under permit, and (3) the collection of grass and minor forest produce of other than specially reserved kinds. The inhabitants both of forest and non-forest villages will thus obtain whatever wood they need for building purposes, agricultural implements or fuel from the nearest *coupes* and will no longer have occasion or legitimate excuse, provided satisfactory arrangements are thus made, to help themselves from the forests. The privilege of collecting dead wood free, which leads probably to graver abuses than all other privileges put together, will be exchanged for the privilege to remove free by head-loads all the branch wood below a certain size available from the annual fellings.

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6. To ensure the success of this arrangement it is of vital importance that whatever timber and firewood is required by the local population from forests shall be wholly and exclusively drawn from these annual fellings. Special care will be necessary to prevent firewood being removed under cover of the privilege granted to forest villagers to lop certain trees for *ráb*. It is probable that for a year or two, this new system will be looked on with some suspicion and disfavour, as an innovation on former customs. We need not here repeat the very strong arguments in its favour as compared with the old system, or the necessity of making the local population understand that it is not merely an experiment like the establishment of the agricultural depôts, but the *only* way in which for the future they will be allowed to obtain timber and firewood from the forests.

Suspension of all forest privileges recommended in case of combination to obstruct new arrangements.

7. All attempts therefore to continue the old irregular exploitation of the forests, and to evade or defy the regulations which the proposed system will necessitate, must be met with a firm hand. In any case in which it may appear that the inhabitants of any village are combining to obstruct the new arrangements or continue in spite of due warnings to cut wood for themselves instead of resorting to the appointed *coupe*, the Collector should be empowered, with the approval of the Commissioner, to suspend all the forest privileges of that village for a time.

Forfeiture of grazing privileges recommended in case of frequent forest fires.

8. The abolition of the dead wood privilege will remove the chief motive for all *intentional* firing of forests, and if the *coupe* system becomes generally popular, forest fires from this cause may be expected to cease altogether. But the numerous accidental fires caused by the carelessness of wayfarers, and the occasional fires for grazing purposes, if those really occur, will not become less because the inducement to manufacture dead wood is removed. These fires, from whatever cause they arise, are so injurious to forest conservancy that we think the responsibility of preventing them should be laid on the residents of the village within whose limits they occur. When these fires are of frequent occurrence forfeiture of grazing privileges for a term would be a just and appropriate penalty.

Abuse of local privileges of obtaining forest produce at favoured rates by sale for trade purposes.

9. There are, however, other abuses which are perhaps more difficult to deal with than any of those we have already noticed. In the one case acts of wanton and intentional spoliation are committed in defiance of regulations. In such cases individual offenders if detected can be prosecuted, and if villagers combine to defy rules their joint responsibility can be enforced by withdrawal of privileges. In the other case persons may conform to rules, obtain timber or firewood as the case may be at favoured rates in a perfectly legitimate manner, and ostensibly for their own consumption, and may yet abuse the privileges given to them by afterwards disposing of the materials so obtained to traders for profit. If a man has a private supply of wood in his occupied lands sufficient for his own wants and he sells that supply to a wood dealer at market rates, he may be justly denied the privilege of replacing material so sold from the forests at less than the price charged to ordinary traders. This subject will be fully dealt with in Chapter VI. in considering the best means of preventing improvident destruction of unreserved trees in occupied lands. But the difficulty is to prevent a man who has no such private supply of wood taking more than he requires for his own consumption from the forest depôts and selling the surplus at a profit, as it is practically impossible to limit the quantity of material to be supplied to each privileged individual to a fixed allowance based on his personal requirements.

10. This point is raised in our circular question No. 23 (Volume III., pages 66 to 69), wherein we have invited suggestions as to any "practical means by which Government, while supplying the reasonable wants of the local population, as regards all kinds of forest produce, at low rates or *gratis*, as the case may be, can at the same time guard against loss of legitimate revenue by preventing professional dealers securing the stocks of such produce as they may require for export to Bombay and other large trade centres, under cover of the privileges granted to local residents for local supply."

11. In our question No. 24 (Volume III., pages 70 to 72) we have further called for opinions as to the best means of preventing a special abuse of a similar

character, which has led to much official correspondence and discussion in the Thána district. This refers to firewood dealers, who, under the system now or recently in force in Thána, take advantage of the privilege of collecting head-loads of dry wood, &c., enjoyed by the wild tribes, to purchase their stocks at lower rates than they would have to pay, if they obtained them in the legitimate way from the Forest Department.

12. In our succeeding question No. 25 (Volume III., pages 73 to 74) we have ourselves suggested a possible remedy for the abuses described, *viz.*, the levy of a "prohibitive export duty on all forest produce taken out of a district, which may not be covered by passes certifiying that it has been lawfully obtained from occupied lands, or bought at the regular auctions held by the Forest Department, or removed under contract with, or under special permits granted by that Department." Many of the officers consulted have expressed themselves in favour of the plan suggested, and there is little doubt that it would prove an effective remedy. After mature reflection, however, we have come to the conclusion that such a measure is inexpedient and unnecessary.

Prevention of abuses described in circular question 23. Amendment of section 41 of the Forest Act necessary.

13. To check abuses such as those described in circular question No. 23, Government must trust principally to the amendment of Section 41 of the Forest Act, so as to bring under effective control the tree produce of all occupied lands as well as forests, while in transit. In Chapter VIII. of this report we have made definite suggestions as to the alterations in the existing law required to effect this object, but we may repeat again here what we have said elsewhere, that all our recommendations as regards local supply and the disposal of reserved trees in occupied lands, are made subject to the understanding that this very necessary and important amendment will be made. Passes for the export of any material removed from forest *coupes* at privileged rates will of course be refused, and once the removal of similar material from occupied lands is brought under control, it will no longer be possible for traders or any other persons to pass off wood obtained from forests under privileges as the produce of private holdings.

14. The alteration of Section 41 may not in itself, however, prevent head-loads of firewood given free to any local residents from finding their way to dealers' yards and becoming mixed up with similar goods obtained legitimately from forests or occupied lands. Head-loads require no passes under the existing regulations, and cannot be brought under the pass rules without causing an amount of inconvenience and annoyance to the poorer classes of the population altogether out of proportion to the benefit of the more effective control that would be thereby secured. There can, therefore, be no possibility of distinguishing between head-loads removed from forest and head-loads removed from occupied lands, and as a consequence there are no means of preventing, even under the most perfect pass system, the export of such wood, should it be worth exporting. There will, however, be one important natural check against such abuse of the head-load privilege under the system we have advisedly recommended in Section II. of Chapter IV, and that is that the only wood allowed to be removed free by head-loads will be inferior branch wood of small size. Wood of this description, as we have learnt from local inquiries, is not now exported from the Konkan districts. It is largely used for local consumption by the poorer classes, but finds no market beyond the district.

15. We look chiefly therefore to the necessary amendment of Section 41 of the Forest Act, and to the fact that the firewood allowed to be removed by head-loads from forest *coupes* will not be in demand for export, for the prevention of the abuse described in our circular question No. 23. Should these checks however prove insufficient, and it is found that wood so obtained is nevertheless being systematically smuggled out of the district, as the produce of occupied lands, it will be a question for further consideration whether it will not in such a contingency be necessary to conduct all sales of material for local consumption at the annual fellings on ordinary trade principles.

16. But we believe that with a strict system of passes and with ordinary vigilance on the part of the local authorities, both Revenue and Forest, such a contingency will not occur. In his answer to question 23 Mr. Crawley-Boevey has rightly laid great stress on the importance of bringing the export trade

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under thorough and effective control. We concur with him in thinking that the village officers should be held responsible that no wood smuggling is allowed for the benefit of licensed dealers, and that it is important that their cordial co-operation as well as that of the villagers generally should be enlisted as a security against abuses of this kind. But it would not, we think, be practicable to adopt his suggestion of registering, licensing, and taking security from all wholesale wood dealers.

Prevention of special abuse of head-load privilege enjoyed by wild tribes.

17. The special abuse alluded to above in paragraph 11 will, we think, be effectually prevented by the new arrangements we have proposed for the local supply of timber and firewood in Section II. of Chapter IV. Under the existing arrangements the wild tribes are allowed to remove free by head-loads for sale or barter all dead wood they may find in the forests. The supply of legitimate dead wood is very limited, and except in certain large forest tracts is insufficient, as our inquiries clearly show, even for the local wants of the forest villagers. But the supply of dead wood can be indefinitely increased by a wanton use of axe and fire, and wild tribes, under cover of this privilege can now supply large quantities of valuable and marketable firewood to unscrupulous dealers. Under the arrangements we propose all such irregular exploitation will be stopped, and the wild tribes' privilege of collection of firewood for sale will be restricted to the removal from the periodical fellings of small branch wood. This material will find a ready local market, but will probably not—as we have mentioned before—be in demand for export.

18. Should such a demand however arise, the export of head-loads of this description can be controlled in the manner suggested in Section II. of Chapter IV. by the levy of fees under Section 39 of the Forest Act. If the wild tribes have a surplus stock of branch wood which they cannot sell locally, they will be permitted, as a part of the scheme described, to bring it by head-loads to any bunders or railway stations. The material so brought can either be taken over directly by the Forest Department at fair rates for subsequent sale to dealers, or arrangements can be made with contractors, according to the plan already followed in the Kolába district, to take over all wood so brought on payment of a royalty of so much per candy. Fees on such head-loads will also under the recommendations we have already made, be levied on entering large towns, where the bulk of the population is non-agricultural. There will of course always be the possibility of attempts being made to pass off such wood, whether intended for export or sale in large towns, as the produce of private holdings, to evade payment of fees. But in any case no revenue will be derived from head-loads of branch wood *locally* consumed, except in the case of large towns; and as the supply from forests will be strictly limited to the quantity yielded by the annual fellings there will be little fear, even if some of this wood is occasionally exported without paying fees, of any serious loss of revenue, while the forests themselves will in no way suffer.

Prevention of abuse of grazing privilege.

19. The only other abuses likely to occur, are abuses of grazing privileges. The village officers will have to be made responsible that grazing regulations, as indeed all other arrangements to meet the wants and conveniences of the local residents, are duly carried out in the spirit in which they are devised. If any cattle are found trespassing in closed compartments of the forests, or if any not specially exempted from payment of grazing fees are sent to open forest areas without due permission, the cattle can be impounded if they can be caught, or the owner, if he can be discovered, can be proceeded against under Section 25 of the Forest Act. But in case of systematic disregard of regulations by whole villages, we think it would be well to lay down that such abuses should be specially punished by the levy of grazing fees for the season, if the grazing is enjoyed free, and by levying double the ordinary fees, if the villagers are already liable to pay fees. The same course might also be taken with regard to individual offenders, when the offences committed are so trifling as to make it undesirable to institute criminal prosecutions.

Systematic plunder of Government forests for trade purposes.

20. In concluding this part of our report we desire to call particular attention to the evidence noted in the margin, which tends to show that very extensive and systematic thefts of timber from Government forests in Bhivandi and Kalyán were committed in the season of 1884-85. In both the instances brought to notice the same proce-

Statement of witness No. 24, Volume II., page 54.
Do. of witness No. 28, Volume II., page 68.

dure appears to have been followed. The standing timber on certain private holdings in the vicinity of the forests is purchased from the occupants. Under cover of these purchases, which may or may not be *bonâ fide* transactions, the parties interested are enabled with very little risk of detection to plunder large quantities of valuable timber from the forests. Unless they or their employés are caught red-handed in the forests convictions are seldom if ever obtained, and even in such cases there is always a loop-hole for escape from criminal prosecution under the plea that the boundaries between the forests and the occupied holdings are ill-defined and have been overstepped by mistake. Once the timber is brought out of the forests it is declared to be the produce of a private holding. As such under the existing law, it can be transported anywhere without a pass. In anticipation however of possible suspicion and inquiry the precaution is sometimes taken of freshly cutting old stools of trees in some private lands, so that these may be pointed out, if necessity arises, as the source of the suspected timber, and at the same time of obliterating all trace of recent cuttings in the forests by burning the stools of the newly felled trees.

21. The proposed amendment of Section 41 of the Forest Act will render the commission of such offences difficult, if not impossible, in future. But even at present systematic frauds of this kind cannot take place without the full knowledge of the residents of the village in which they occur, nor can contractors and their agents systematically cut valuable standing timber under cover of a contract to remove fallen dead wood, without attracting the attention of the whole country side. The failure of the local authorities to detect and punish the true offenders in these cases shows clearly that as matters now stand between the Forest Department and the people little or no aid can be expected in the prevention or punishment of forest plunder. Messrs. Shuttleworth, Thatte and Mádan have all admitted the fact that the *pátils* and villagers as a rule hold aloof and give no assistance. It is not a sufficient remedy to declare that the *pátils* are responsible in such cases, although such responsibility must, if necessary, be strictly enforced. *The general arrangements made for the convenience of the local agricultural population must be such as will restore their confidence in the forest policy of Government. Their active sympathy and co-operation in preventing forest offences of the nature above indicated cannot be otherwise commanded.* The settlement of the various matters at issue which we have proposed, in considering each subject separately, will, we trust, go far to secure this much-desired result.

CHAPTER X.

FOREST ESTABLISHMENTS—DUTIES OF VILLAGE OFFICERS IN CONNECTION WITH FORESTS—RELATIONS OF THE FOREST TO THE REVENUE DEPARTMENT.

Chapter X.
FOREST ESTABLISHMENTS, &c.

Responsibility of village officers for prosecution of forest offences.

The village officers have from the earliest times been held generally responsible for the prevention of forest offences and for the protection of Government trees within their limits without extra remuneration. This responsibility has moreover been clearly laid down in Section 78 of the Forest Act. In former years also it was customary to call upon the village officers for quarterly reports of the condition of the forests. The evidence which we have recorded leads us however to think that there is a general, if mistaken, impression at the present time amongst the *vatandár pátils* of the North Konkan, that their former responsibility as regards the preservation of the forests has been very materially lessened by the organisation of a special protective establishment, with which they have no direct connection, and with which—as the evidence only too clearly shows—they have little or no sympathy. The village officers, under the present system, are entrusted with the collection of all revenue derived from grazing in the forests. They are also, we believe, occasionally employed in some districts to collect other items of forest revenue. For this work they receive a certain percentage of the collection, according to a fixed scale. But their services are not specially engaged as paid guardians of the forests.

2. The advantage of securing the loyal and cordial assistance of the village officers generally, and especially of the hereditary *vatandár pátils* in the protection of the forests, cannot be exaggerated. We have anxiously considered whether it might not be possible to give the *vatandárs* of different forest villages a more direct interest in the preservation of the forests within their limits, either by making the Revenue or Police *pátils* for the time being *ex-officio* forest guards, with suitable remuneration, or by nominating the fittest available members of the *vatandár* families as separate forest *pátils*. In our circular questions Nos. 33 to 39 (*vide* Volume III., pages 90—103) we have specially called for opinions on this suggestion, as one of the possible measures by which the co-operation of the people in forest conservancy can be secured. As the subject is of considerable importance, we would invite special attention to the replies received to these questions.

Opinions on the advantages or otherwise of employing village officers as Forest Guards.

3. The following extracts from the Summary show how the proposal is regarded by the different officers consulted :—

"Messrs. Davidson, Lamb, Crawley-Boevey, Loch, Lagháte, Fagan, Blackwell, Major Ward, Messrs. Lawrence, Winchester, Fletcher, Thatte, Keyser, Bháu Rámchandra, Náráyan Bhikáji, Steward, Woodburn, East, Snow, Bulkley, Charles, Atkins, Whitcombe, Shaháne, Gibson and Betham, all think that the village officers should be employed to guard the forests within their boundaries and should receive special remuneration in some form or other for their services. But while the spirit of the proposal meets with general approval, there are minor differences of opinion as to the manner in which it can best be carried out. For instance Messrs. East, Snow and Fagan object to the employment of village accountants on forest duties, while they would utilize the services of the *pátils* and village watchmen. Messrs. Loch, Atkins and Betham suggest the employment of special Forest *pátils* chosen from among the *vatandárs* instead of adding forest duties to the ordinary work of the Revenue and Police *pátils*. Again as regards the class of forests to be placed under the protection of the village establishments, while most of the officers consulted would apparently impose on the *pátils* and village watchmen the duty of guarding *all* forests in their limits, Mr. Gibson would restrict their duties to the charge of village forests, and Mr. Lawrence thinks the closed portions of Reserved Forests should be protected exclusively by the forest guards of the regular establishment. As regards method of remuneration Mr. Bulkley would pay village officers by free grants of wood instead of by a fixed annual allowance; Mr. Betham would give them *inám* lands instead of cash; Mr. Whitcombe would pay them only in those years in which a revenue is derived from the forests; and Mr. Shaháne would give them regular monthly pay as forest guards. Lastly, Messrs. Steward and Woodburn while approving of the system think that before being generally adopted it should be tried in a few selected places and gradually extended if found to work well.

On the other hand Messrs. Mackenzie, Ebden, Frost, Gleeson, Wilkins and Ryan disapprove of the regular employment and remuneration of village officers in connection with forest duties. But Messrs. Wilkins and Ryan would reward special services rendered by such officials in the detection of forest offences and prevention of abuse of privileges by giving them free grants of wood."

Conclusions of the Commission on the proposal to employ *pátils* as *ex-officio* Forest Guards. Reasons for not doing so in the Konkan.

4. It will be seen from the extracts above quoted that a large majority of the official witnesses are in favour of the direct employment and remuneration of village officers as forest guards. We should have been glad to have been able to endorse the opinion of the majority, as we consider that the co-operation of the village officers should be secured by all possible means. But after full consideration of the subject we regret that we are unable to make any recommendations in this direction. The chief objection to the regular employment of *pátils* as forest guards, is that the Reserved Forests as now constituted will be worked in large blocks, to which numerous villages have contributed lands, but without reference to village boundaries. Had we been able to recommend the formation of village forests on a sufficient scale to supply the entire wants of local residents, we should unhesitatingly have proposed that such areas should be placed under the protection of the village officers. But most of the forest settlements in Thána hitherto effected, have been, for good reasons, carried out on the principles laid down by the Forest Conference of 1882. Thus, as a rule, all the areas formerly demarcated as village reserves are now incorporated in the Reserved Forests, in the belief "that the wants of the people can be better met, when the entire area of the more important forests is worked under one system and properly conserved and blocked." Under this system village forests can no longer be the exclusive source of local supply.

5. If a separate beat could be made of the land which each village has added to a reserved forest block, the *pátils* might perhaps with advantage be made the *ex-officio* guards of such beats. But such an arrangement would not work well. The block must in future be the unit in forest management, and not the village. The local influence of a *pátil* is necessarily limited to his own village, and the special advantage of this influence might be lost, if his duties were extended beyond it. Moreover in the North Konkan districts, as Mr. Loch has rightly pointed out, the village bond is weak and the authority of the *pátils* has never been so great as in the Deccan and Southern Marátha Country. The Konkani *pátils* are of more recent origin. We learn from Regulation I of 1808 that "the managers of the cultivation under the Portuguese were *máhátrás*, an Indian term importing an experienced senior or old man," and that the ablest of these *máhátrás* were subsequently constituted *pátils* by the Marátha Government after their conquest of the country in 1737. Again in the southern *tálukás* of Kolába, where the *khoti* tenure prevails, there is no hereditary village agency which could be utilised in the protection of the forests.

Recommendations with a view to utilising local agency as much as possible in the protection of forests.

6. At the same time, though we cannot recommend the employment of *pátils* as *ex-officio* forest guards, we think it desirable that local agency should be utilised as much as possible by the Forest Department. We recommend accordingly that the village officers should be employed as now in the collection of grazing revenue, and that as far as possible all the *coupe* depôts that will be opened every year for the supply of timber, firewood, &c., to local residents should be placed in charge of the most competent of the *vatandár pátils* residing in the groups of villages for whose convenience they may be intended, the officers selected being treated as stipendiary servants of the Forest Department; that the 'guard' service should be recruited as far as possible from the local *vatandárs* and heads of wild tribes, and that the enlistment of foreigners and Pardeshis should be discouraged; and that if it be found possible hereafter to form village forests in any part of the district, their protection should be entrusted exclusively to the village officers.

Forest Establishment.

7. In the statistical part of Volume IV. (pages 230 to 232) will be found statements showing the present strength of subordinate forest establishments in Thána and Kolába. The total numerical strength and annual cost are as follows :—

	No.	Total annual salary.
Thána.		
Guards	383	35,004
Round guards	92	12,552
Rangers	14	6,600
Total ...	489	54,156

	No.	Total annual salary.
Kolába.		
Guards	184	15,972
Round guards	24	3,492
Rangers	7	2,880
Total ...	215	22,344

No reduction in present strength recommended.

Were it possible to utilise the village agency more largely, a considerable reduction in the number of guards now employed would probably be feasible; but under the present arrangements, we are not prepared to recommend any reduction of the stipendiary establishment.

Relations of the Forest and Revenue Departments.

Existing orders on the subject.

8. Lastly we have considered whether any changes are called for in the relations now subsisting between the officers of the Forest and Revenue Departments. The present orders on the subject are summarised at pages 239 and 240 of Nairne's Revenue Hand-book. They are briefly as follows :—

(1). Subject to certain restrictions, the Divisional Forest officer is to be subordinate to the Collector in all forest matters.

(2), (3). All correspondence relating to the management of the forests between the Divisional Forest Officer and the Conservator must pass through the Collector.

(4). The Collector is not to issue orders to the Divisional Forest Officer affecting forest management direct, but if he deems it necessary to order him to proceed to a particular locality, he can do so, sending a copy of such order to the Conservator.

(5). The Conservator is the controlling authority in all matters of patronage in the subordinate branches and in all matters of departmental discipline.

Official opinion on the subject.

9. The opinions of the officers consulted on the subject are printed in full at pages 342 to 344 of Volume II. It will be seen that while Messrs. Loch, Mackenzie, Shuttleworth and Sinclair advocate no change in the present relations, Messrs. Mulock, Keyser and Atkins consider that the Divisional Forest Officer and his subordinates should be placed in more direct subordination to the Collector than hitherto. Mr. Mulock would even go further and place the *táluka* subordinates of the Forest Department under the supervision of the *mámlatdárs* of the *tálukás* in which they serve. He writes :—

"At present the Forest Department is independent of the Revenue Department, and correspondence between the Divisional Forest Officer and the Conservator merely passes through the Collector of the district under orders of Government. The Divisional Forest Officer is, therefore, only nominally subordinate to the Collector, while the forest range officers and forest guards are in no way subordinate to the Divisional Revenue officers or to the *táluka* Revenue officers. The forest guards are very illiterate and ignorant, never having qualified by examination or otherwise for their posts. As a rule, they cannot read, and I have never met a forest ranger who was not totally ignorant of the provisions of the Forest Act and the rules passed under it. As to the standing orders of Government regarding the Forest settlement of their ranges they have never heard of them. The consequence is they interfere where they have no right to interfere, and necessarily harass the people. This state of things should certainly not be allowed to continue. And I think all should be thoroughly instructed in their duties and brought under the supervision of the *mámlatdár* of the *táluka* in which they serve by being made subordinate to him. This, I believe, would do away with a good deal of the friction now existing between the people and the Forest staff, and, on the other hand, the revenue subordinates would take a more direct interest in forests and their conservancy."

Mr. Atkins writes :—

"I think that in all administrative and revenue matters the Divisional Forest Officer should merely be the Collector's Assistant. The Conservator's duties should be confined to technical matters of scientific forestry. He should also advise the Collector on all subjects on which the latter asks for advice: and should submit reports to the Collector for information. Most of the present race of Collectors have had considerable experience in the difficulties of forest management; and few, if any, of them can be called anti-foresters. I should

not however object to the Conservator retaining even the administrative charge of any forests which are to be worked exclusively on trade principles without having regard to local requirements."

Mr. Keyser writes :—

"For all administrative purposes I would put the Divisional Forest Officer and his subordinates directly under the Collector, who should control their movements, appoint or promote subordinates, and be the appellate power in all questions of rights and privilege. The Conservator is, except in the head-quarters district, too far off.

"The scientific and financial control, by which I mean all questions of conservancy and plantation, dealings with contractors and so on, I would leave with the Conservator."

10. The present orders appear to us to be unobjectionable in spirit. There is no doubt however that they have not in all cases prevented friction. The Thána Collector's letter No. 1567 of the 24th March 1884 gives an instance of this (*vide* Volume IV, pages 105 and 106). It is, we think, of vital importance that the Revenue officers of all grades should cordially co-operate in the work of forest conservancy. To enable them to do this the Collector must have a potent voice in all matters affecting the forest management of his charge. These remarks have a special significance in the Konkan districts, where the rights and privileges of the people are so largely mixed with those of the State, and where under the system of demarcation now found necessary, Imperial and local wants have as a rule to be satisfied from the same areas. In order to secure this end more completely we recommend that Rule 4 be amended so as to empower the Collector to issue orders direct to the Divisional Forest Officer whenever he considers anything in the action of the department to be against the spirit of Government orders or to call for immediate interference. The Collector should in every such case send immediately to the Conservator a copy of the order issued by him to enable the latter, if he thinks fit, to refer the matter to higher authority. The Divisional Forest Officer should however carry out any instructions so received from the Collector without hesitation and without waiting for further orders.

Recommendations.

11. The present practice obtaining in Thána by which all correspondence relating to the management of the forests between the Divisional Forest Officers and the Range Forest Officers passes through the *mámlatdárs* should be maintained and recognised, but the *mámlatdárs* should be bound to pass on all such papers within 24 hours of receipt. The *mámlatdárs* under this system have no excuse for saying that they are not kept fully informed of what is going on in their *tálukás* as regards forest matters. It is also desirable that Government should again point out to Revenue officers of all grades the necessity of their rendering all the assistance in their powers to make forest conservancy both effective and popular, and of promptly bringing to light all defects and abuses in forest administration which demand attention.

CHAPTER XI.

TRADE.

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TRADE.

In the Resolution appointing the Commission we are asked to state our opinion on three points connected with the supply of forest produce to the trade. The questions asked are as follows :—

1. Ought the system of passes for firewood and bamboos to be maintained after settlement ?

2. Ought the depôt system to be abandoned, or might it not, with advantage, be extended for the supply of trade ?

3. Ought export and sale of forest produce otherwise than from depôts to be prohibited, and if not, what measures ought to be taken to prevent traders utilizing privileges given to agricultural residents and the wild tribes ?

2. The evidence which our inquiries have elicited on the working of the timber trade is comparatively meagre and unimportant. We have received no complaints from the wood merchants as a class distinct from the rest of the local population. What little evidence the Memorialists have brought forward on the subject has been given with the object of showing that, if the forests have been recklessly destroyed in past years, the result is due to no fault of the people, but solely to departmental mismanagement. On behalf of the local residents they stoutly deny the charge of having exhausted or impoverished the forest resources, and attribute the denudation which is complained of to the overweening desire of the Forest Department to increase the revenue, and the ruinous trade contracts which have been the result of this policy. Mr. Mackenzie accurately represents the general feeling of the local residents on this question, when he states (*vide* Volume III., page 92) :—

Popular opinion as to the exhaustion of the forests to meet trade demands.

"They see the Department cutting down trees of every kind, selling grass, preventing the cultivators from getting *ráb*, or wood of any real use for building or agricultural implements. They know that so far as conservancy is concerned, the Department have done little but take the cutting of wood out of the people's hands into their own, and have done practically nothing in the way of replanting where they have destroyed. All this the Department say the people did before, and the Department called it destruction of forests; all this the Department do now, and they call it conservancy of the forests !"

3. It cannot be doubted that much injury to the forests has resulted in past years from the inability of the Forest Department, as then organised, to effectually control the operations of its contractors. The annual contracts for the collection of fallen dead-wood fit for timber and fuel have been for many years a fruitful source of fraud and abuse. There is little doubt that large quantities of valuable standing timber have been illicitly cut and removed under cover of these *kolpát* contracts. The destruction of forests, however, cannot, we think, be fairly attributed to any one single cause. The chief causes no doubt have been the large and growing demands of Bombay and other trade centres, the exceptional facilities for export of forest produce from most parts of the Northern Konkan, and the absence of effective checks against the abuse of local privileges. The mistakes which have been made by the Forest Department, are such as any newly organised and undermanned department might be expected to make. As Mr. Sinclair justly observes (*vide* Volume III., page 83) :—

Causes of destruction of forests.

"We are at the very beginning of scientific forestry of any sort here. All we know now to do is to sell a certain amount of timber and firewood by contract every year. With defined areas and improved organization it will be found easy enough to do whatever may be wished with the existing timber and other forest produce, and in many places very considerably to increase their amount."

By the introduction of working plans and the opening out by roads of the extensive blocks of inland forests, the resources of the Konkan forests will be gradually developed and improved.

Ought the system of passes for firewood and bamboos to be maintained after settlement ?

4. As regards the first question raised in the Resolution it is not clear whether the 'passes' alluded to are passes under Section 41 of the Forest Act for the control of timber, &c., in transit, or 'permits' authorising the holders, on payment of prescribed fees, to take certain specified produce from the forests.

The 'pass system' for the control of timber and other forest produce in transit should not only in our opinion be maintained as regards material removed from Government forests, but should be made equally applicable to timber, &c., removed from occupied lands. With this end in view we have in Chapter VIII. strongly advised the amendment of Section 41 of the Forest Act. If the term 'pass system,' as used in the question, refers to the supply of forest produce under permits authorizing the holders to collect for themselves and remove specified quantities on payment of fees, we may state that we are strongly opposed to the retention of any such system to meet the *firewood* demand either of the trade or the local residents. We see no objection however to its retention for the supply of bamboos to all classes of consumers.

The pass system for the control of timber in transit should be maintained and extended to the tree produce of occupied lands as well as State forests.

Permit system unsuited for supply of firewood but unobjectionable as regards bamboos.

5. In discussing the best means of satisfying the wants of local residents in the matter of firewood in Section II. of Chapter IV, we have advised that in future the entire local demand for this material from forests should be supplied exclusively from departmental fellings, at temporary depôts on or near the sites of the different *coupes*. We have pointed out the grave abuses to which any system is liable, which allows irregular exploitation of the forests for firewood in any shape. We have in consequence recommended the withdrawal of the privilege now enjoyed by the wild tribes of collecting dead-wood in the forests free of payment for use or sale, and the grant in exchange to the poorer classes of the North Konkan generally of a privilege to remove free of charge for any purpose all the small branch wood available from the annual fellings. For the same reasons we have proposed to abolish the present permit system in force in Thána for the local supply of firewood.

Abuses to which the permit system is liable.

6. As confusion is sometimes caused by the indiscriminate use of the terms 'permit system' and 'pass system' it is as well to state clearly what the former system is. Mr. Mádan has correctly described it as follows (*vide* Volume II. page 44):—

Details of the permit system followed in Thána.

"'The permit system for supplying firewood both to the trade and for local consumption, is as follows:—*Nákás* are established at all railway stations and depôts, and the *nákedárs* issue permits in a printed form to all applicants for the removal of dead-wood for fuel on payment of a fee of Re. 1 per cart-load. In Mokháda, where there are no *nákedárs*, the round guards issue the permits. These permits allow the holders to go to specified forests and collect the specified quantity of material within a specified time. The time allowed is regulated according to the distance of the forest from the *náka*; two days are allowed for collection of wood and one day for every ten miles to be travelled to and fro. On returning to the *náka* with the firewood, the permit holder exchanges the permit for a pass under Section 41 of the Indian Forest Act which covers the export of the material either by road, rail or water. This is called the *jaláu kolpát* system."

7. Up to the present year both trade and local demands for firewood were met in this way, the former to a large, and the latter to a very limited extent. In consequence of the flagrant abuses to which the system led, it has been abandoned during the past season as regards trade supply. It has however been retained for the present to meet local demands, and to enable local residents to provide themselves with firewood in a legitimate way, until more suitable arrangements can be made. The fees charged to local residents per cart-load have at the same time been reduced from Re. 1 to 8 annas. The trade demand for firewood has during the past season been supplied by the auction sale of standing trees in selected compartments. We consider that the permit system above described for the supply of firewood stands condemned on the clearest possible evidence. It is not likely to be tried again for trade supply. Its retention to meet the local demand is in our opinion equally unnecessary and objectionable. The wants of the trade and the local population can be met far more conveniently and with far less injury to the forests by annual fellings on a sufficient scale to meet the general demand. The fellings for the supply of trade should however be kept entirely distinct from the special fellings for local supply.

Ought the depôt system to be abandoned, or might it not, with advantage, be extended for the supply of trade?

8. The answer to the 2nd question must depend entirely on the particular depôt system to which allusion is made. Depôts may be fixed or temporary. Permanent depôts may be established at bunders and railway stations, and other places convenient for purposes of export, or in the vicinity of large markets. Temporary depôts on the other hand may be formed in the forests wherever the material yielded by the periodical fellings can be most conveniently stacked. The

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depôts again may be stocked by departmental labour or by contract. The contracts again may be for felling and carrying a certain quantity of wood to the depôts at fixed rates, or they may be made on the share system, the contractors bearing all the cost of felling and carriage to depôts on receiving a stipulated percentage of the proceeds of the sale of the timber.

Official opinions as to the best means of meeting trade demands.

9. In our Circular question No. 47 we have invited opinion as to the best system for supplying trade demands. As stated in the summary of the answers received to this question (*vide* Volume III., pages 125 to 127,) "most of the officers consulted declare in favour of the depôt system, but inasmuch as depôts are used for different purposes in different districts, and are worked under different principles, it cannot be assumed that all who recommend depôts for the supply of trade are in reality advocating the same system." In our remarks on the subject of the local supply of timber, firewood and bamboos, (*vide* Chapter IV., Section II,) we have already stated that we consider that the local demand for wood of all kinds can be better met from temporary depôts established in the immediate vicinity of the periodical fellings, than from permanent depôts. Superior timber which will bear the cost of carriage to long distances can perhaps be supplied as conveniently at fixed depôts as on the site of the forest *coupes*. But the inferior wood for which there is so large a local demand amongst the cultivating classes can be supplied far more cheaply and conveniently at temporary depôts wherever the fellings take place.

General conclusions of the Commission.

10. Local circumstances can, we think, alone determine the particular system best adapted for the supply of the trade. The permit system is no doubt unsuited in every way for the purpose. Close supervision is almost impossible under this system and without supervision gross frauds and abuses are inevitable. But it is an open question whether the fellings to meet trade demands should be effected departmentally or by contract. There is possibly less risk of fraud and injury to the forests under the departmental system. But on the other hand the cost of felling by Government agency is greater than by contract, and the margin of profit proportionately less. The contract system again has in some cases grievously failed, while in others it has succeeded very well. The inference is that, if properly worked, it is not necessarily more open to abuse than the departmental system. No one system however can fairly he said to be applicable in all localities. The timber market like all other markets requires constant humouring. So long as the demand of the local residents for wood from the forests is fairly and fully met, and adequate safe guards are provided against the abuse of local privileges, the Forest Department should, we think, be left absolutely unfettered in its dealings with the trade.

The Forest Department should be left unfettered in its dealings with the trade.

Ought export and sale of forest produce otherwise than from depôts to be prohibited, and if not, what measures ought to be taken to prevent traders utilizing privileges given to agricultural residents and the wild tribes?

11. Our opinion on the points raised in the third question has already been stated in the portion of our report dealing with local supply and abuse of privileges. The measures we advocate to safeguard the abuse of local privileges are (1) the amendment of Section 41 of the Forest Act so as to bring the tree produce of occupied lands under effective control while in transit; (2) the abolition of the present privilege of collecting dead-wood in the forests enjoyed by forest villagers and wild tribes, and the grant in exchange of a privilege to all classes who choose to avail themselves of it, to remove free of payment for any purpose all the small branch wood obtainable from the annual fellings. This will, we believe, effectually prevent the abuses alluded to in the question. This subject has been so fully discussed in other parts of the report that it is unnecessary to repeat here the arguments we have adduced in favour of the measures above described.

CHAPTER XII.

CONCLUSION.

In the preceding chapters we have reviewed the general evidence and stated our opinion as to the best way of settling each question of importance. The task has necessarily been laborious owing to the number and variety of the complaints, and the great mass of evidence to be weighed. If any apology is due for the length of this report, it must be remembered that the grievances we have had to inquire into do not refer merely to single recent acts restricting this or that local privilege, but to the whole policy of Government as regards trees and the user of forests and waste lands, as pursued for a great number of years past. The complaints are not limited, as might be supposed, to the administration of the forests under the comparatively recent Act of 1878. Some complaints date as far back as the year 1839, when the prohibition against cutting teak in forest lands was first issued, or it may be, reaffirmed. It has been necessary therefore, in order to judge of the merits of many of the claims and grievances brought forward, to review the forest administration of the North Konkan districts, so far as it affects each particular claim, from the earliest period of which any record is forthcoming down to the present day. The separate treatment of different subjects which are more or less intimately connected one with the other, has also involved much repetition which, for the sake of clearness, we have found unavoidable. We will not prolong our report unnecessarily by again repeating in detail our conclusions on each separate issue. As however our recommendations are scattered through many pages of the preceding chapters, it is desirable that we should state in a few words the leading principles on which our proposals are based, and give a brief summary of the diffrerent measures we consider necessary for the satisfactory settlement of the popular grievances.

2. The evidence shows clearly that the inhabitants of the North Konkan have from the earliest times supplied themselves from the nearest forests and waste lands with all the common timber, firewood and other forest produce they have required for *bonâ fide* domestic and agricultural purposes. The necessity of protecting valuable forests from reckless destruction has been realised and asserted by the British Government for the last half century or more. But the restrictions imposed from time to time in the earlier years of forest administration were intended mainly to check the exhaustion of forest resources by indiscriminate cutting for the export trade, and had little or no effect on the exercise of purely local privileges. No really *effective* measures to regulate or restrict this ancient user of the local agricultural population can be said to have been taken until after the passing of the Forest Act. But the setting aside of certain defined areas as village forests or 2nd class reserves between 1863 and 1878, for the exercise of local forest privileges was a step in this direction, as well as an acknowledgment by Government of the necessity of making special provision for local wants.

3. We hold that former custom and the conditions of agriculture in the North Konkan give the cultivators of this tract a strong and a special claim to liberal treatment in respect of all arrangements for the supply and distribution of forest produce. The justification for the claims of the people to be supplied with materials from the forest on favoured terms for home and field use rests on the fact, clearly established by the evidence, that the supplies available from sources other than the existing forests are insufficient to meet their wants. This result is due in great measure to the distribution of the available waste or *varkas* area between private holdings, communal pasture lands, and forests, effected at the Survey. It has been shown very clearly that much of the tree-covered area formerly used by the people as a source of *ráb* supply was not allotted to the *de facto* occupants at the Survey, but included in the communal waste area. No immediate inconvenience arose from this distribution, for there was no actual interruption of the former user of the waste lands. The private forest resources of the cultivators were in fact supplemented from the general forest and waste area to the full

extent of the local demand. The user of such portions of the waste and forest area as were set apart as common pasture lands and village reserves, was moreover from time to time expressly authorized.

4. So long as the people could satisfy all their legitimate wants from these communal lands they had no reasonable grounds of complaint. Up to 1882 the guiding principle of all demarcations of forests in the North Konkan had been to effect a complete separation of the forest areas required to meet the local demand from those to be set apart as Imperial reserves under the strictest possible conservancy. Under the new departure taken in 1882, local supply ceased to be a factor in the demarcation of forests. It was thought that local wants could be better met in future by ignoring the previous distinction between village and Imperial reserves, and working the entire forest area under one uniform system. Thus all hill ranges and large forest blocks were to be made Reserved forests under the new Act, and only such isolated hill lands as were of sufficient size to come conveniently within the limits of a forest beat were to be retained as Protected forests. The natural result of the application of these principles has been that large areas of *gurcharan* and village reserve, on which the forest villagers had previously depended to a great extent for their supplies of wood for fuel and farm implements, and of tree loppings for *ráb*, were incorporated in the Reserved forests. The stricter regulations for the protection of these areas, which have been introduced as a consequence of the general forest policy of recent years have, as we have shown in the preceding chapters, greatly curtailed the privileges formerly enjoyed by the people in these areas.

5. The legal competency of the State, as proprietor of all waste lands, to assign such areas for any purposes it may deem necessary in the public interest, and to regulate the exercise of all privileges therein at its discretion, admits of no doubt, as a general proposition. But the exercise of this right imposes a corresponding obligation to take due care that any action thus taken does not cause hardship or undue inconvenience to vested local interests. We fully recognise the fact that local conditions may, in the more thickly populated Konkan *tálukás*, make it expedient to place under forest management and conservancy much of the area formerly assigned for communal pasture and the supply of local forest wants. A complete separation of local from Imperial forests may, as we have stated, be possible and desirable in the wilder parts of the country where local wants are limited and forest resources ample. But such separation cannot be effected in other localities, without sacrificing all effective guarantees for the permanency of the supply. In such cases the local residents can have no just grounds of complaint, if reasonable provision for their wants is made in the general forest area. In the recent settlements, however, the fact appears to have been overlooked that the reserved forests, as constituted in the settled *tálukás*, contain virtually all, or nearly all, the areas which were formerly assigned for the supply of local wants. The privileges now allowed in the Reserved and Protected forests respectively, of the settled *tálukás* are indeed such as would have been suitable and proper, had these forests corresponded in any degree with the former divisions of forest lands into Imperial and village reserves. But in settling these privileges due account has not in our opinion been taken of the very different principles under which these recent demarcations have been effected.

6. While however we advocate a liberal settlement of the claims of all classes of the local population, we cannot admit any claims to be reasonable, the exercise of which is inconsistent with the necessity, which is fully admitted by the Memorialists themselves, of so regulating the use of the forests as to provide reasonable and effective safeguards against the exhaustion of the supply. It is also manifestly right that the local demand should in the first instance be met as far as possible from the produce of the lands already in the occupation of the people under different tenures, and from the communal waste lands excluded from forests. The State forests cannot be fairly laid under contribution for this purpose until all other available resources have been fully utilized.

7. Applying these principles we have recommended the most liberal arrangements for meeting the grazing requirement of cultivators, and the local demand for forest produce of all kinds for *bonâ fide* home and field use. We have also urged the expediency of liberal rules for free grants of wood both for public purposes, and to meet exceptional cases of distress.

8. In the absence of any reliable data as to the total *ráb* demand of the forest villages, and the supply now available, or which can in future be made available, from sources other than existing forests, we have been unable to suggest any *permanent* arrangements for meeting the wants of cultivators who have no private *shindád* lands at all, or insufficient lands of this description in proportion to their rice cultivation. We have, therefore, proposed that as a temporary concession for the next ten years the cultivators of forest villages shall be allowed to lop certain specified trees in the open compartments of the Reserved forests. This concession will prevent any immediate inconvenience and will cause little appreciable injury to the forests. The trees in the areas laid under contribution for *ráb* in years past are admittedly valueless as timber. When any compartment has been clean felled, the fresh growth will of course be protected by closure. After the period named has elapsed it will be desirable to review the whole question again by the light of the further experience and information collected in the interval. Those occupants who have suitable *shindád* lands already can then be fairly thrown entirely on their own resources. But some further provision will be necessary for occupants who have no such lands. How such provision can best be made is a question which can be better decided, when the general effects of the measures we have proposed for the preservation of the tree-growth in occupied lands have been seen, and when better information is available as to the extent to which the waste lands excluded from forests can be relied on for purposes of *ráb*-supply.

9. To ensure the co-operation of the people in forest conservancy the most liberal regulations in all matters connected with local supply are essentially necessary. We are confident that the measures detailed in Chapter IV, while making ample provision for all reasonable local wants, and giving the general population a more direct interest in the preservation of the forests than they now have, can be carried out without any real injury to forest conservancy and without the loss of any legitimate forest revenue.

10. As a safeguard against the abuse of local privileges by the sale to traders of produce obtained from the forests at free or favoured rates, and the subsequent passing off of such materials as the produce of occupied lands, we have strongly urged (*vide* chapter VIII), as a vital condition of the introduction of the various measures proposed, the amendment of Section 41 of the Forest Act, in order to legalize the control in transit of all tree produce, whether obtained from forests or private holdings.

11. We have also proposed to make the continuance of forest privileges to individual occupants of *varkas* lands dependent on the discretion they may exercise with regard to the disposal of the tree produce of occupied lands containing trees in which they have acquired full proprietary rights. The present forest difficulties are due to a large extent to the improvident destruction of the unreserved tree-growth in occupied lands, which was surrendered unconditionally to occupants at the survey in all the North Konkan *tálukás* except Sanján and Kolvan. Government may not be able to resume the control over the cutting of trees so parted with. They may, however, fairly presume that the wants of occupants who cut their trees for the export trade are already fully provided for, and that they have no reasonable claim to replace the material so sold in the best market by supplies obtained from the forests at free or favoured rates. So long as a cultivator abstains from trading in the trees in his land, and utilizes them solely for domestic and agricultural purposes, or for *local* sale only, it is unnecessary and undesirable to place him under any limitations as to the exercise of any forest privileges he would ordinarily enjoy. But if he exports or sells for export the tree produce of his holding he may fairly be considered a trader in wood and not a privileged cultivator.

12. As a measure of conciliation and general good policy we have recommended (*vide* Chapter VI) a liberal settlement of the claims of the people as regards all trees, the right to which has been reserved by Government in occupied lands. Our object is to encourage in every possible way the preservation of trees in the *varkas* and *shindád* lands allotted to cultivators, as a permanent source of *ráb* supply, and to discourage and prevent by all possible means the reckless clearing of such lands for export trade purposes. There is little hope of occupants guarding and preserving the trees in their lands, however, *until the*

full use and enjoyment of the trees for all domestic and agricultural wants is unequivocally guaranteed to them. All *bonâ fide* cultivators will, we believe, cheerfully submit to any restrictions ensuring that the tree produce of occupied lands shall be utilised exclusively to meet local as distinguished from trade demands, *provided they clearly understand that such restrictions are imposed solely in their own interests, and that Government will in no case take advantage of such reservations for revenue purposes.*

13. We have advised accordingly that throughout the Thána district all the royalty trees in which the proprietary right still vests in Government should be made over to occupants, with or without payment as the case may be, subject to the conditions (1) that the wood of such trees shall not be exported or sold for export, and (2) that if the land on which the trees grow has been uncultivated for ten years or more it shall not be cleared for cultivation, but shall be kept as permanent *shindád* land. In consideration of these conditions we have recommended that the price to be charged for teak and other royalty trees shall not exceed half the market value, and that three-fourths of the assessment on lands permanently set aside as *ráb* reserves shall be remitted. We have further proposed that the junglewood trees in the occupied lands of Kolvan and Sanján, the right in which was reserved by Government at the settlement of those *tálukás*, shall be handed over to occupants on the same conditions but without payment.

14. The special circumstances of the Kolába district and the action already taken there as regards the disposal of the reserved trees make it inexpedient to burden the sale of the few trees still owned by Government in that district with a condition against export. But although no such condition can now be imposed, it is nevertheless important that the reckless cutting of trees for trade purposes should be checked in that district by judicious executive action, and by making the forest privileges of individual occupants dependent on the discretion they may exercise in that respect.

15. As a further inducement to the cultivators of both districts to set aside suitable lands for *ráb* plantations, we have proposed that three-fourths of the assessment shall be remitted in the case of any *varkas* lands which occupants may *voluntarily* agree, at any time during the settlement, to devote to this purpose, subject to the same conditions as regards export.

16. In Chapter VII. we have proposed an equitable settlement of the claims of the Thána people to the fruit trees planted or preserved by them according to former custom in waste lands.

17. In Chapter V. we have dealt with the claims of the wild tribes, and have stated our conclusions that it is undesirable to perpetuate or accentuate the present distinction between them and other depressed labouring classes by special tribal privileges or indulgences. Their present circumstances are such as to make it expedient that they should be given as far as practicable the monopoly of all labour entailed by departmental forest operations. It will be well also to continue the privilege they now enjoy of taking inferior wood from the forests for the construction and repair of their huts. But in respect of forest privileges generally we think, for the reasons stated, that it is undesirable to treat them as a peculiar people. They will share, under the proposals made in the different sections of our chapter dealing with local supply, all the privileges granted to the residents of forest villages. These privileges are we think sufficiently liberal to prevent any of the poorer dwellers in the forests from becoming a source of anxiety in the future. We do not consider it necessary to give the wild tribes a *monopoly* of the local sale of head-loads of firewood and minor forest produce. All classes who are mainly dependent for their living on the wages they earn by collecting and distributing forest produce should be allowed the same privileges, if they choose to avail themselves of them. It may fairly be assumed that no one will resort to this mode of life unless compelled to do so by necessity. The prevention of all irregular exploitation of the forests for timber and firewood, and the limitation of free head-loads of the latter material to the small branch-wood available from the forest fellings will be sufficient safeguards against the abuses of the privileges recommended.

18. The privileges which we think should be conceded to the residents and cultivators of forest villages, including the wild tribes, have been detailed in the various sections of our report dealing with local supply. It will be useful however to recapitulate them here. They are intended to meet the wants and convenience of the well-to-do classes as well as those who are chiefly dependent on the forests for their living. The provisions as regards the supply of timber and superior firewood will naturally be superfluous in the case of the latter :—

Proposed privileges of residents and cultivators of forest villages including wild tribes.

Grazing.

(1). They may graze their cattle free in the unclosed portions of the forests (paragraph 56 of Section 1 of Chapter IV).

Firewood.

(2). They may, in common with all poor inhabitants of the district remove by heads-loads free of payment for barter, sale or consumption, all branch or small wood of two inches and less in diameter from the special annual cuttings for local supply. They may remove the better class of firewood from the same *coupes* by carts on the payment of a fee of 8 annas per cart.

Timber.

(3). They may purchase wood for building and agricultural purposes from the same *coupes* either at the rates fixed for the supply of forest villagers, or at the periodical petty auctions.

Bamboos.

(4). They may take bamboos for their *bonâ fide* personal requirements from the unclosed portions of the forest without payment and without any description of passes, provided the bamboos are not transported beyond the limits of the forest block or the village in which they reside or hold lands.

Ráb.

(5). They may as a temporary privilege and until further orders, make up the deficiency of their *ráb* supply by taking loppings of certain specified kinds of trees from the unclosed portions of the forests (*vide* Chapter III, Section III, paragraph 59), in addition to the privilege they already enjoy of removing grass, reeds, leaves, shrubs and brushwood from the same areas. They may also remove grass from the closed portions of the forests.

Minor Forest Produce.

(6). At present *hirda* and *beheda* nuts and *mowra* flowers should be considered as strictly reserved. Excepting these, they may collect free of charge for use, barter or sale all unreserved and unfarmed minor produce such as fruits, leaves, bark, herbs and roots for medicinal or religious purposes.

(7). They may also collect for *bonâ fide* personal consumption such articles of minor forest produce as may have been farmed, but not strictly reserved.

Kárvi.

(8). They may cut and remove *kárvi* free of charge from the unclosed portions of the forest for domestic and agricultural use, and also by head-loads for sale beyond the limits of the villages in which they reside.

Thorns.

(9). They may remove thorns from the unclosed portions of the forest for *bonâ fide* domestic and agricultural use.

Earth and stones.

(10). They may take earth and stones, free of charge, for purely agricultural purposes from the unclosed portions of the forests.

19. It will be observed that in dealing with forest privileges of all kinds we have made no distinction between Reserved and Protected forests. We are

very strongly of opinion that the same privileges should be allowed in all *open* compartments of the forests, whether Protected or Reserved. All rules as regards the exercise of local privileges should obviously be as simple and intelligible to the people as possible. Different sets of rules for different classes of forest will cause much unnecessary confusion. Under the system of demarcation adopted in the settled *tálukás* of Kalyán, Bassein, Bhivandi, Karjat, Salsette, Alibág, Panvel, &c., the *raison d'être* for Protected forests is not apparent. The areas which have been constituted forests of this class, consist, we understand, of comparatively small and isolated hill lands. Bare and denuded lands of this description have, as a rule, been excluded from forests, while similar lands containing valuable tree-growth have been made Protected forests. It has been deemed advisable to grant more liberal privileges in the Protected than in the Reserved forests. Had these Protected forests been expressly selected with reference to their area, situation and resources, as a provision for local wants, or had they been made Protected forests as a temporary measure only, with the view of eventually disforesting them, when required for extension of cultivation, there might be excellent reason for working them under a different system from the reserved or Imperial forests. As however their selection in the *tálukás* already settled appears to have been determined by other considerations, we can see no reason for making any distinction between them and the Reserved forests as regards the exercise of local privileges. All the Protected forest blocks in the settled *tálukás* except those of the Mátherán plateau, which have been made Protected forests for special reasons, should, we think, be made Reserved forests if they are likely to repay systematic conservancy. Those that will not do so had better be disforested, the exercise of privileges therein being regulated by rules under the Land Revenue Code. This course however will involve a further inspection of the lands by the demarcation officers and further proceedings under the Forest Act. Should this be thought undesirable or inconvenient we see no objection to the areas in question being retained nominally as Protected forests, *provided the rules for their management are identical with those for the Reserved forests.* We would suggest also that it would be well for Government to publish all the privileges conceded in the forests of either description in the form of rules under Section 75 of the Forest Act.

20. We have divided our report for the sake of clearness and convenience into as many chapters as there appeared to be subjects of sufficient importance to be separately considered. We have, we believe, covered in this way the whole range of the popular complaints. Each subject separately discussed has however a very intimate bearing on all the rest. Our proposals for the settlement of each question, though separately described in the report, are but links in one connected chain, and component parts of what we trust will be considered and accepted as one homogeneous scheme. All our recommendations are made in this hope and understanding. Minor alterations in the details of the proposed settlements may of course be found necessary. But the rejection of the leading principles of any one portion will in our opinion destroy or materially impair the efficiency of the remaining parts.

21. The success or failure of the measures we have advocated must necessarily depend in a great degree on the *spirit* in which they are carried out by the local Revenue and Forest officers of all grades. Sympathy with local wants and tolerance of local prejudices must be shown as well as firmness and perseverance in enforcing necessary regulations. Above all things the finality of the system adopted for the local supply of timber and firewood must be recognised by all concerned. It must be clearly understood that Government, while showing the utmost consideration possible for the wants and customs of the people, and making every endeavour to place within the reach of all classes of local residents, according to their means and convenience, a sufficient supply of the wood they need for home and field use, will in future deal with a strong hand with any *systematic* and *deliberate* attempts to evade or defy regulations, which are deemed absolutely necessary in the interests of the public at large.

22. In their Resolution No. 2206 of the 26th April 1880 Government have clearly and wisely laid down the principles which should guide Forest officers in instituting prosecutions for forest offences :—

"The Honourable the Governor in Council would impress upon the officers of the Forest Department the absolute necessity for the exercise of the greatest care and forbearance in the institution of prosecutions under the Forest Act. Criminal charges under the Act should only be preferred after warnings have been disregarded, and in cases where no reasonable doubts can exist that the offender has intentionally and knowingly transgressed the provisions of the Act, and has not merely ignorantly acted in accordance with previous custom, or in pursuance of a right which he in good faith believed that he possessed."

In a subsequent Resolution No. 5730 of the 28th October 1880, Government have again referred to this subject in the following words:—

"It is in the opinion of His Excellency the Governor in Council most undesirable that ignorant villagers should be prosecuted in the Criminal Courts for taking from the Government forests a few twigs or small branches or a little brushwood of unappreciable value. In no instance at all events should a person be prosecuted for a first offence of so exceedingly trivial a nature. A mere warning on the part of the Forest officer would suffice. But if after being detected and warned once or twice the same person is again discovered cutting Government trees, the circumstances of the case would be altered, and wilful and repeated infractions of the law may form a suitable and proper ground for criminal prosecutions. As far as possible however, such prosecutions should be avoided, and recourse should only be had to them when real injury is being caused to the Government forests, and when there is good reason to believe that the offender is deliberately and of set purpose transgressing the law."

23. These principles cannot be too often or too strongly impressed on the minds of all concerned. Nor again should the clear declaration of policy contained in Government Resolution No. 6144 of the 1st November 1875 be forgotten. "In striving to attain these ends" (*i.e.* the preservation of timber from wasteful destruction, and the realisation of the revenue fairly to be expected from the forests) "Government are bound to pay due regard to the habits and wants of perhaps the poorest class of the population, and they strongly deprecate vexatious and oppressive interference with their daily life for the purpose of enforcing in petty details the so-called rights of the Forest Department." The history of the forest management of the Thána district from 1882 to 1885 has convinced us that the principles above laid down have not always been uniformly adhered to in actual practice. The forest regulations have been in many cases, we think, unnecessarily stringent, and defective arrangements for meeting reasonable local demands have made it difficult for the poorer classes to satisfy their wants in a legitimate manner. Had more care and forbearance been exercised in instituting criminal prosecutions for petty breaches of rules in recent years, until experience had proved the necessity of the rules, and the sufficiency of the provision made for local supply by the arrangements in force, there would have been less justification than there is for the complaint of the Memorialists that the actual policy pursued has been frequently very hard to reconcile with the professed principles of forest administration.

24. In conclusion we desire to express our gratitude to our colleague Ráv Bahádur Y. M. Kelkar for the cordial assistance he has given us, and our appreciation of the conspicuous industry and ability with which he has, from first to last, conducted his duties as Secretary of the Commission.

G. W. VIDAL.
RA'MCHANDRA TRIMBAK ACHA'RYA.
KRISHNA'JI LAKSHMAN NULKAR.
E. C. OZANNE.
W. PEYTON.
R. C. WROUGHTON.
Y. M. KELKAR.

Minute by Mr. R. C. Wroughton.

I have signed this report as the opinion of the majority of the Commission. Though there are very many points, both of the report and the proposals, with which I cannot agree, it would be impertinent for me, having had an opportunity of stating my views in the discussions of the Commission, to now demand to review the report, in detail, as to each point on which I have been out-voted. I will merely record therefore that these proposals, which are admittedly a compromise, are in my opinion very strongly in favour of the local inhabitants. The Commission have appreciated and strongly recorded their opinion on two points, *viz.* :—

1. That promiscuous exploitation (such as "dead wood," &c.) must cease.

2. That Section 41 of the Forest Act and the rules thereunder must be amended so as to include the produce of private holdings. And the establishment of these is no doubt worth, from a forest point of view, considerable concessions. But I think they are more than balanced, as witness, the very liberal grant of free grazing, the free grant of head-load wood, the unlimited grant of firewood at a very moderate fee, the very generous rules as to free grants, the parting with the Government royalty in teak in occupied lands as proposed, all concessions representing considerable sums of public money.

There are however three points on which I feel bound to record my individual opinion. Two of these may almost be termed subsidiary matters and the third is "*ráb.*"

1*st.*—In my opinion the provision for retail sale (otherwise than by auction) in Chapter IV, Section II, paragraphs 61 *et seq.*, is a great mistake. The system proposed is scarcely distinguishable from that of the agricultural depôts and has nearly all its defects. A Government department cannot successfully undertake this kind of retail sale. Either each depôt must be in direct charge of an officer with authority to assess the value of each lot (which is financially impossible) or all the lots which are cheap at the fixed rate, will be bought up and then an outcry raised that the remainder are too dear. I would ask that the system of retail auction sales advocated (paragraph 64) as a subsidiary measure should be the main and only means of distribution as it is in almost if not every other Division of the Northern Circle. Indeed I think it should be substituted for the system of fixed rates even for firewood.

2*nd.*—While personally opposed to *any* system of free grants I accept the one proposed as probably the least objectionable, but I must record my protest against the provision made in the penultimate paragraph (Chapter IV, Section V, paragraph 18) for cases of urgency. It evidently cannot be provided for by any working plan and, in however small a degree, it is a reversion to promiscuous exploitation. It is limited, it is to be presumed, to the case of houses burnt. When such an accident occurs in a town the calamity is met by a money grant (public subscription or otherwise) if necessary, and the same should be the rule everywhere. It is, I would urge, a mistaken policy to treat the rayat as a helpless child. Money help may be legitimate, but in no case should the regular rule of free grants be departed from.

3*rd.*—*Ráb.* I differ so entirely from everything recorded by the Commission on this point that I scarcely know how to formulate my protest within reasonable limits.

The arguments urged are :—

1. That shrubs, leaves, grass, &c., are not sufficiently in excess of the present demand (as subsidiary *ráb* material) to offer any hope of their taking the place of loppings.

2. That the *varkas* lands (suitable for yielding *ráb* material) in occupation, are irregularly distributed among occupants.

3. That these lands are probably insufficient; a "great many" having been included in the communal lands, at the Survey, and so in forest, later.

I think Mr. Ozanne's experiments have shown that even pure grass *ráb*, if carefully and intelligently worked does not give such very poor results, and I feel sure that it might be very much more largely employed, either alone or in combination with leaves and shrubs. The arguments against its larger employment (as above) are (1) insufficient quantity, (2) intransportability. That even at present the quantity is insufficient I am by no means prepared to admit, and in this connection I would call attention to the facts noted in Chapter II, paragraph 21, as to export. Admitting, however, the present insufficiency of grass and *d fortiori* of leaves, &c., what is the cause? Undoubtedly forest fires. Could these be stopped, it is impossible to say how much the supply would be increased, but even if doubled it would go a long way towards meeting the demand for *ráb* material. As to the argument of intransportability I think it may be ignored. The remedy, provided in these proposals, is limited to concessions to forest villages, and as far as these are concerned the factor of intransportability has little value. The only thing that can cause forest fires to cease is to make their prevention the interest of forest villagers, and this can only be done by letting them know that the question of lopping concessions is closed once for all; that no lopping will now be allowed and no disforesting of forest is recognised as possible in either the near or the far future.

That the *varkas* lands are irregularly distributed among Survey occupants is true enough, but the only direct remedy is resumption and redistribution, which is, of course, out of the question. I maintain however that the object may be indirectly gained by removing once for all, all hope of lopping concessions, when the lands will most certainly redistribute themselves, as far as is necessary; especially if the measures proposed for preventing the export of material from *varkas* numbers (which now gives them a value apart from cultivation) have any measure of success.

That the *varkas* lands in occupation are inadequate to meet the demand for *ráb* material at the present day is possibly true. But I do not believe this is due to the inclusion of such lands in communal grazing lands, at the Survey, at any rate, as regards the settled *tálukás* whose case is especially referred to in these proposals. The language of the committee of 1863 (*vide* Chapter IV, Section III, paragraph 8) implies the exact contrary. Colonel Francis' letter, on which the supposition is based, specially mentions the Shahápur *táluka* (which is under the Kolvan Settlement and *all* trees are reserved to Government) in which the *varkas* lands had little or no value except in their relation to cultivation. Captain Lloyd writing specially with reference to the other *tálukás* says "within the last few years the price of grain has greatly increased and has led to a general demand for land but the amount of unoccupied land in the district (excepting forest) is limited and the attention of the people has turned to their *ráb* numbers which, if cleared, would supply what was required. As an additional impulse to this end the price of wood also increased and Government at the same time decided that the ownership of the trees shall be vested in the occupant. These causes, *i.e.* the demand for land for cultivation, the value of wood in the market added to the ownership of the trees being in the hands of the rayats, have combined to bring about the wholesale clearance of *ráb* numbers, which is now being actively carried out all over the district." And again "the result of all this clearance is that the area of cultivation and consequent consumption of *ráb* is greatly increased whereas the supply no longer exists, a flood of petitions is now pouring in upon the authorities applying for fresh numbers whilst meanwhile the forests are plundered"; and again and still plainer "* * * I have mentioned *ráb* as one of the requirements to be obtained by the cultivator from the village allotments whereas it is shown here that *ráb* numbers were especially marked off for them at the time of the Survey, the truth being that owing to the causes already mentioned a large proportion of *ráb* numbers have been cleared and the rayats have been allowed to fall back upon Government forests, many of which, especially Murbád, present a very sorry appearance." These words, especially in conjunction with Mr. Atkins' evidence, as to the manner in which *vahivát* (immemorial custom) has arisen and is now arising, are, to me conclusive as to the reason

of the inadequacy of the occupied *varkás* lands to furnish the whole supply of *ráb* material, as was intended when they were given out; and there is not the slightest foundation in them for the assertion that the pre-survey *varkas* lands were in any way curtailed. The Commission's report recognises this denudation as a partial cause of the failure of the supply of *ráb* material and one of the main objects of its proposals is their reboisement. To this end, in my opinion, these proposals are quite useless, nay, inimical. This result (*viz.*, the reboisement of the *varkas* numbers) can be obtained in only one way, *viz.*, by taking away all excuse for trusting to further lopping concessions; by refusing now, once for all, to in any way recognise the demand for lopping concessions in the present or disforestation in the future. The remedy proposed by the Commission is the exact opposite. It is the concession of lopping in the present to forest villagers and a semi-promise of disforestation in the near future. I would most earnestly enter my protest against this scheme. It is a policy of hesitation and concession of material points which will, and must shake faith in the finality of all the other proposals. It is yielding to the outcry of a few at the expense of the general propulation. It can only benefit the forest villagers while the opposite policy will benefit the whole population by preserving the source of supply of firewood, &c., (in which they can share) at but small, if any, hardship to the forest villagers provided they are only made to understand that it is the inevitable. Forest fires will then cease and the ample supply of *ráb* material will be then husbanded, which now, in the shape of fire and smoke, makes life a misery in the Thána district for some months in every year. The forest villager owning *varkas* will find it more profitable to grow loppings than to export wood to Bombay, and it is quite conceivable that the fashion once set, public opinion may be led to frown upon the denudation of any land which is required for *ráb* supply.

I must record in conclusion that I have signed this report as distinctly limited to the conditions of the Thána and Kolába districts and as offering not one single argument for the concession of similar privileges in any other districts.

R. C. WROUGHTON,

Deputy Conservator of Forests.

CAMP CHA'S:

Poona District, 8th February 1887.

Minute by Ra'o Sa'heb Ra'mchandra Trimbak A'charya.

1. There is only one point on which I differ from the views expressed in the report. I do not consider that sufficient provision is made in the recommendations contained in Chapter IV., Section III., for meeting the *ráb* requirements of the cultivators of non-forest villages, who have hitherto resorted to the forests of neighbouring villages for that purpose.

I am glad to observe that the uncontradicted oral evidence before the Commission, the very fair answers to our general questions by most of the official witnesses, and the laborious experiments on the *ráb* cultivation in different parts of the Thána and Kolába districts by our colleague Mr. Ozanne, have led the Commission to arrive at the unanimous conclusion that the *ráb* is indispensably necessary for rice, *nágli* and *vari* cultivations in the Konkan (*vide* paragraph 1, page 78, Chapter IV., Section III.) and that the private holdings of the *varkas* lands are in most cases not sufficient to supply the holders with enough of *ráb* to carry on the rice and other cultivations with profitable results.

2. I am aware that this Commission has proposed (*vide* paragraph 59, page 97, Chapter IV., Section III.) that "for ten years to come a general privilege be "accorded to all residents and cultivators of villages, which have contributed lands "to forest, to lop certain trees for *ráb* in all open compartments of the blocks to "which the villages are respectively attached." But at the same time the majority of the members of the Commission have not thought it necessary to recommend the cultivators of the non-forest villages to the same privilege on the ground that these villages have not contributed lands to the formation of forest and also from the fear that "if the rayats of non-forest villages are allowed to lop trees in "the forest at all, there will always be great risk of the privilege being abused "by their cutting branches of firewood under the guise of *táhál*" (*vide* paragraph 60, page 98, Chapter IV., Section III). In my opinion this fear of the abuse of the privilege by the non-forest villagers is an imaginary one; *first*, by the present system of the forest conservancy they now fully know their delicate position in this matter and would always be on their guard not to abuse the privilege for fear of its being lost; and *secondly*, the distance between the non-forest villages and the forests they have been accustomed to use *plus* the personal labour required for conveying *ráb* materials to the place of destination would be a safeguard against any extravagant use of those materials from such forests. It is, I suppose, only in extreme cases that the people do resort to forests for the present and will in future, to get their *ráb* from a long distance. It is not worth their while to go to a distance for *ráb* when they can get it near at hand. I think, therefore, that there should be no hesitation in granting them their long-enjoyed customary rights.

3. The pinching necessity of *ráb* to the cultivators of the non-forest villages, who have been really dependent on the neighbouring forest is certainly perceived by my colleagues and to meet their wants a provision has been made by the last sentence of paragraph 60, page 98, Chapter IV., Section III., to the effect that "If any cultivators residing in non-forest villages have hitherto really "depended for their supply of tree loppings required for *ráb* on the forests of "neighbouring villages, their wants in this respect will be fully met by the privi-"lege they will have, under the proposal made in the preceding section, of re-"moving by head-loads all the small branch wood available from the annual "fellings either for *ráb* or firewood." In my humble opinion the annual fellings in certain blocks under the working plan now under contemplation of Government would be very limited ones, and in majority of cases the branch wood will be scarcely sufficient to supply the wants of the villagers themselves. In such cases the proposal above alluded to would be a dead letter and the non-forest villagers would be left in the same difficult position as they have been since the introduction of the new system of the forest conservancy.

4. To avoid this difficulty I would strongly recommend that the cultivators of the non-forest villages who can succeed in proving their customary right of supplying themselves with the necessary *ráb* from a particular neighbouring forests, should be allowed the same privileges as have been recommended to the forest villages for the following reasons:—

(1). The distinction between the forest and non-forest villages is to my knowledge a creature of the recommendations of the Forest Committee of 1863 at Thána. It is an arbitrary one and mainly created for the purposes of the forest conservancy. In my humble opinion this distinction should not have any effect against the long *customary rights or vahivát* of the several villages from time immemorial.

(2). A number of witnesses examined by the Associations both at Thána and Kolába have stated that there are several villages that depend for *ráb*, firewood and other forest produce upon the neighbouring forest villages and that in some instances their statements have been confirmed by persons belonging to those forest villages. On the face of this evidence to deny the non-forest villages their *customary rights* would entail on them a great hardship, which I seriously recommend should be avoided as much as possible and that they may be left on the same level as their neighbours.

(3). As in many of the forest villages the *shindád* lands of the rayats have not been separately marked off at the time of the survey but have been mostly included in the area now proposed to be made "Reserved Forests," it is perfectly a good reason to recommend that those rayats should be supplied with their *ráb* from the forest area (*vide* page 97, paragraph 59, Chapter IV., Section III). But I think the same reasoning, with a little modification, holds good in cases of the non-forest villages. As a matter of fact the *shindád* lands in forest villages were not assessed before the survey, and in many instances have not been still assessed. They were and have been parts and parcels of the forest area from which the rayats of the non-forest villages used to get and have been still getting their *ráb* supplies, with this little distinction that the holders of the rice lands, lying in the vicinity of the *shindád* pieces, are supposed to have a preferable claim for *ráb*, &c., on those *shindád* pieces, and out-comers are required to go farther to the forest to get their supply of the same material. But both of them had not to pay anything for it and had the same and equal privileges to supply themselves with the necessary *ráb* and firewood. The former possessed their rice lands in the same villages whereas the latter had theirs in the neighbouring ones. The formation of the Reserved forest for the present has deprived both of them of the lands in which they had their customary use of taking *ráb* and therefore I am inclined to treat the non-forest villages with the same considerations as have been recommended for the forest ones.

(4). The survey settlement in existence was introduced in the non-forest villages at a time when they had their customary rights of bringing *ráb*, &c., from the available neighbouring forests and if Government deny the same rights or privileges during the continuance of the same settlement, I am afraid that those villages will have a reason for complaining that Government have curtailed their customary rights to the great detriment to their *ráb* and other supplies. Nay they would perhaps complain that Government have broken one of the implied terms of the contract of the settlement. As the rice cultivation depends solely on the *ráb*-supply it would be a great hardship to deny them the same opportunities of supplying themselves with *ráb* materials as have been recommended to their neighbours, the forest villagers.

(5). As for other several reasons for my recommendation I entirely agree with what has been said by Mr. Crawley-Boevey in his replies to general questions Nos. 11, 12 and 13 by this Commission and for easy reference I append a copy of these replies.

5. It should be and I am sure it is the great aim and object of Government not to give room to the agricultural classes to complain of any of the breaches of the terms of settlement either expressed in so many words or were under the contemplation of the Survey Department, when the original survey was introduced. Before assessing the rice lands at a particular rate, every survey officer, as a matter of course, must have taken into consideration the position of each

village as to the getting of necessary *ráb*-supply and wood for agricultural purposes, &c., and if those villagers are deprived of their customary rights of taking the necessary materials from a particular neighbouring forest, they would be put to great difficulties as far as the rice cultivation is concerned. Notwithstanding the deprivation of their *ráb*-supply and consequently a diminution in the produce of the fields, they will be obliged to pay the same assessment as they have been paying for the present.

6. It will be observed from the answers of Messrs. 1 Crawley-Boevey, 2 Thatte, 3 Keyser, 4 Winchester, 5 Logan, 6 Whitcombe, 7 Bháu Rámchandra, 8 Mackenzie, 9 Shewan, 10 Náráyan Bhikáji, 11 Gleeson, 12 Mádan, 13 Blackwell, 14 Loch and 15 Gibson, to the 11th and 12th questions of the Forest Commission (*vide* pages 34, 40 and 45, Volume III. of our report) that these 15 experienced officers are all for recognizing and continuing the old *vahivát* or customary rights wherever they have been in existence for the present.

7. I am aware that to allow these customary rights would entail some enquiry as to where and what were the rights exercised by a particular village or a group of villages, in a neighbouring forest; but this enquiry if Government desires to make it, would be cheaply and conveniently made through the *mámlatdárs* or the Assistant Collectors while in their districts, and an entry be made in the village register of each such village as to the nature and extent of such rights once for all. This mode, I hope, will avoid the complaints by and discontent among the agricultural classes.

8. In short I would recommend that non-forest villagers, who can succeed in proving their long customary rights of taking *ráb*, firewood, &c., from a particular neighbouring forest should be allowed to exercise those rights at least for a period of ten years when the subject of the *ráb*-supply is likely to be reconsidered according to the recommendation of this Commission (*vide supra* page 99, paragraph 62 of Chapter IV., Section III.).

RA'MCHANDRA TRIMBAK ACHA'RYA.

Extract from Replies of Mr. A. W. Crawley-Boevey to Circular Questions asked by the Forest Commission.

II.—Privileges to residents of villages within whose limits no State forests are included.

11. The term "State forest" is a purely artificial term denoting for the purposes of the Forest Act such land as the Government is pleased by a simple notification to set apart and subject to strict conservancy rules in the interest of forest conservancy. Broadly speaking it may be said that all villages in Thána and in the North Konkan generally have a direct and most important interest in the jungle and hill land now set apart as State forest. The idea that villages situated in the hills have stronger claims or more direct interest in forest lands than the villages situated in the plains seems to me to be entirely erroneous. The residents of villages in the plains have from time immemorial been accustomed to resort to the nearest jungle tract for the supply of all their numerous wants. They have in fact heretofore enjoyed in the Thána hills and jungles precisely the same rights of user as the residents of hill villages; and inasmuch as all the best cultivation is in the plain villages and all the more substantial inhabitants live there, the rights and privileges conceded to the one cannot, in my opinion, equitably be withheld from the other. The wants of the residents in plain and coast villages are in many respects far more important and imperative than the wants of the comparatively humble classes who live in forest villages. It may be presumed that some at least of the inhabitants of non-forest villages are descendants of persons residing at some remote period in forest villages. If this presumption is correct this is additional reason why privileges enjoyed by inhabitants of forest villages should not be denied to them.

For the reasons assigned, I think that the inhabitants of villages within whose limits there are no State forests are entitled to obtain free of cost or on such equitable terms as may hereafter be decided all the supplies of forest produce to which they are by custom entitled. The problem for solution is how to provide the necessary supplies of forest produce consistently with reasonable rules of forest conservancy. If village forests can be formed as proposed and if suitable regulations can be made under Section 44 of the Revenue Code an adequate solution may be found. Residents of non-forest villages requiring forest produce must, in my opinion, as far as possible, supply their own wants by means of their own labour as they have heretofore been accustomed to do. It is quite impracticable to attempt to supply the innumerable wants of an agricultural community by any official or departmental agency whatever.

12. I am clearly of opinion, for the reasons above stated, that in Thána old custom gives to the inhabitants of non-forest villages a reasonable claim to enjoy such communal privileges as regards grazing and forest produce as may be conceded to the inhabitants of forest villages. I do not see that the rights of these classes have any tendency to clash; nor are any special rules necessary.

13. The distinction now drawn as regards privileges in State forest between residents of forest and non-forest villages is in my opinion quite unwarranted and is highly injurious to the latter class. The apprehension alluded to in the second part of this question is, in my opinion, imaginary. I have never heard of any complaint by the forest tribes that their neighbours in the plain or coast villages were injuring them by their customary user of the forests.

Minute by Ra'o Baha'dur Krishna'jee Lakshman Nulkar.

I have agreed to the several recommendations in the foregoing report as the only practical means of redressing the grievances of the people, and providing the only possible eventual solution of the difficulties presented by the existing confused state of the relations between land revenue and forest administration of the districts under review. I have however reserved to myself the opportunity of adding such observations and explanations on the general argument of the report, as I thought I should record somewhat more candidly than could exactly suit the composition of an official document prepared for the signatures of a majority of servants of Government, though a good deal of what I have to submit could be read by a careful student between the lines of the various parts of the report.

2. When a strong and stable foreign government succeeds an indigenous one in comparatively unsettled parts of a country, extreme measures of settlement at the earlier stages of the new administration are not unfrequently resorted to; but it is difficult to imagine a greater degree of oscillations of policy as regards the various agricultural interests than is to be met with in the different administrative measures taken at different epochs of the history of these districts during the past eighty years. Beginning with a policy of putting every acre under cultivation and ending with the absorption of every inch that could be laid hands upon with impunity in the name of forest conservancy, a succession of extreme measures ran in opposite directions, inevitably resulting in the present chronic antagonism between the true interests of agriculture and a sound forest conservancy.

3. On the acquisition of these territories, their first want was found to be population, the country being for the most part a "thinly inhabited forest." The gradual settlement in it of "the respectable and opulent natives of Bombay" and even the "importation of Chinese emigrants" were looked up to as possible means of bringing the land under cultivation. Even after half a century of British rule, waste land was so abundant as to create a feeling of despair as to the future of the district; and the increase of cultivation was so great an object of all administrative measures that the poorest people were allowed to cut down wherever they chose as many trees as they liked merely for the purpose of clearing the land.

4. About the year 1855-56 the Revenue Survey was introduced, its avowed policy being to assign as much land as could possibly be assessed for revenue as arable and put under tillage. One of the recognised merits of the survey operations was to show the largest possible area as assessed and under cultivation. Waste lands such as *shindád*, *gurcharan*, or forest, which the people used freely for their agricultural and domestic wants, were left almost untouched because every other interest was to be made subservient to the great object of increased agriculture, and also because it was not thought worth while to go to the enormous cost of measuring and mapping them along with the more important work to be done in connection with the lands under tillage.

5. *Pari passu* with these land revenue measures, spasmodic efforts were now and then made by the forest department, then in its embryo, to look after the larger and well-known imperial forests, and to collect such revenue as could be got under various names, based on custom,—more or less modified,—of former Governments. But whenever these levies encroached on the customary rights and privileges acquired by the rural communities, they were effectively opposed by the people who, in 1851, are reported to have surrounded the Conservator in thousands, demanding immediate redress, and "little disposed to stop short even of personal violence."

6. Along with this unsettled state of things as between agriculture and forest conservancy, there arose a fast-increasing demand for timber and firewood from the rapidly growing city of Bombay in the immediate neighbourhood, to which were suddenly added the almost insatiable requisitions of the two great systems of Railway which pierced the district in two directions. Thus, if the

forests practically lay open to depredations by the Railway contractors, it is no wonder that the poor inhabitants found themselves unable to resist the temptation of turning their opportunities of profiting by the windfall. But the wonder is that while the short-sighted policy of the latter in denuding their own holdings of trees for small present profits has recoiled on them with all the strength of a powerful Government department, the wholesale destruction of public forests along the lines of the Railways by an authorised agency has scarcely been alluded to by that department as a subject of complaint in the course of this inquiry.

7. Measurement and nominal record of the *shindád* lands and the survey demarcation of some of the forests into imperial and village shares were undertaken and partially carried out in some parts subsequent to the revenue survey and settlement of 1855-56, resulting in a more or less restriction of the unlimited user previously enjoyed by the people all over the waste lands. Between the first revenue survey and the year 1862 various orders, many of them contradictory, were passed with the view of gradually restricting the rights and privileges of the people as regards forest produce; and the reorganisation of the forest establishments which took place in 1862 led to further, though still desultory, interference with and loud complaints from the people. The Forest Committee of 1863 and one or two subsequent ones failed to bring about any satisfactory settlement of the varied questions which had cropped up, followed by louder complaints which pressed for settlement and increased with the increasing strength of the grip of the newly augmented Forest Department which apparently felt the necessity for a financial justification for its existence, if not for further extension. The greed of forest revenue gathered such strength as to lead to the sale by auction to strangers, by groups of villages, of every piece of grass-land therein, sometimes including patches of waste around cultivated fields. While this ingenious plan of raising funds for the credit side of the forest budget often yielded not more than a rupee or two per hundred acres, the hardship to the villagers and their attitude towards such forest conservancy may be easily imagined.

8. At this juncture the Government of India passed its Forest Act VII of 1878—an event which happened to be synchronous with the advent into this presidency of a regime characteristic for its grasp of conception and vigour of execution of large measures of development and reform; a regime which would brook no human obstacle or opposition, which sought to compress within its narrow span of five years' lease of office the ordinary achievements of a generation or two. It was under such a regime that section 34 of the said Act (VII of 1878) was enforced in this presidency. The section provides that:

"Within twelve months from the date on which this Act comes into force within the territories administered by any local Government, such Government shall, *after consideration* of the rights of the Government and *private persons* in all forest lands or waste lands *then under its executive control for purposes of forest conservancy*, determine which of such lands (if any) can, according to *justice, equity*, and *good conscience*, be classed as reserved forests or protected forests, under this Act, and declare by notification in the local official gazette any lands so classed to be reserved or protected forests as the case may be." * *

NOTE. The italics are mine. K. L. N.

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It seems plain that such lands as may be already under the actual executive control of the local Government "*for purposes of forest conservancy*," were alone to be notified and treated as protected or reserved forests. About 135 square miles had been, up to the date of the Act of 1878, marked off and set apart as Government forests in Thána, and this area only could be correctly said to be under Government control "for purposes of forest conservancy" as contemplated by that Act. But by a notification of March 1st, 1879, Government arbitrarily added to this area, about 1,529 square miles, and suddenly declared the same as Government forest, in the name of law, "justice, equity and good conscience." The schedule which was appended to this notification containing detailed lists of lands so taken up, included all recognized communal lands belonging to the village communities, such as common *shindád* lands, village forests specially set apart for village use in former forest demarcations, village grazing lands recognised as such by survey settlement, salt-marshes, &c. In short, by this notification, Government claimed as forest every acre of land which did not happen to be entered in their land registers as actually owned and occupied by private individuals.

9. This sweeping measure, followed by the opinion of the Forest Committee of 1882 accepted by Government, that *táhál ráb* was not absolutely necessary for rice cultivation in Thána, and by decisions of Forest Settlement Officers declaring the new forest areas to be generally free of all private rights, reduced the people to straits unparalleled in the history of the fiscal administration of the Konkan. The principles which guided the new forest demarcations differed totally from those which regulated all former similar operations in which a suitable portion of the forests was invariably set apart for village use as a first charge. Such a provision ceased to be a factor in the new demarcations. It was stated before the Commission that in some places fuel became so difficult to get even for the cremation of the dead that a man was compelled to pull down his own hut in order to use the timber for the purpose, and some others had to bury their dead. The result of all the sharp practices resorted to by forest subordinates in the name of effective forest conservancy was that the people were reduced to a choice between starvation and bribery to get what was their customary right. That they chose the latter as a temporary relief is now a matter of contemporary history. A huge system of bribery of the petty foresters by subscription in every village and hamlet gradually came into existence, and the people waited in apparent peacefulness and patience in hopes of ultimate success of the constitutional means they were advised to adopt in order to obtain justice. Most reliable evidence of this systematic bribery and corruption of forest servants would have poured in before the Commission almost *ad libitum* but for the caution which had to be administered to the witnesses that their statements were not privileged and that such might render them liable to a criminal prosecution for defamation.

10. This temporary relief so universally purchased could not last long, and but for the tentative measures adopted by Government from time to time during the past two years in order to relax the stringency of the new policy, the people would have been driven to the last resort. The antagonism and strife which however prevailed until very recently in consequence of the constant friction between the people and the conservancy department,—a friction into which the executive of the country were irresistibly drawn,—was the necessary result of the new-born zeal for forestry which knew no bounds. The administration of such homogeneous parts of government as agriculture and forest conservancy had fallen into the hands of two distinct departments, one of them suddenly becoming the favourite child of the prevailing policy of the hour. It is no wonder that the latter should become almost unruly. Complaints, accusations, recriminations, between the people and the public departments, embittered the ordinary official relations between the servants of the same Government, and bewildered the people as to who really represented in the district the authority of the central Government.

11. The people were prosecuted for trivial and technical offences, while it was generally believed, not always without good grounds, that servants and contractors of the Forest Department escaped punishment even for grave offences. A forest guard who robbed cash from a poor man's hut on pretence of search for stolen forest produce and was sentenced to a term of imprisonment, found means to engage two professional lawyers to defend him, and on leaving the prison easily found re-employment in the Government forest service in another division of the same district, not I believe with knowledge of the facts on the part of the high officers, but undoubtedly in consequence of the effective combination to connive among the subordinate grades brought about by the general demoralization of the department. While the worst that could be alleged against the people with any reason was that they denuded their own lands of tree-growth for profit and fell back on the forests for their wants, subordinate foresters freely levied blackmail on the people and the forest contractors carried on wholesale illicit cuttings of valuable timber in broad day-light without let or hindrance, the foresters sometimes actually helping them, and the village authorities often impotently looking on, having no correct knowledge of the nature of the proceedings. The feeling of likes and dislikes, prejudice against the people as the greatest enemies of forest conservancy, and confidence in their own subordinates, rose to such a degree as often to blind the highest forest officers to what was actually passing around them. Every forest offence was believed to be due to the connivance if not to active assistance of the villagers. One of the forest departmental witnesses produced

before the Commission the original vernacular proceedings of inquiry into an extensive robbery of teak-timber by a forest contractor as an example of how the villagers help or conceal such offences. But what did these very papers disclose? Facts quite the reverse of the allegations. The illicit cuttings were going on for over two months, wood-cutters, carts, and boats being employed openly on specific terms to carry the timber to Bombay. The *pátil* failed to obtain satisfactory explanation from the local forest guard as to the doings of the contractors, and the first discovery and report of this systematic robbery was made by the *taláti* of the circle, who held a preliminary inquiry on the spot in the presence of the *pátil* and other village notables, recorded a most complete chain of evidence against the offenders, attached several hundred pieces of fresh cut teak timber from the contractors' yard, and sent all the papers to the *mámlatdár*, earnestly requesting to be allowed to conduct the criminal prosecution against the offending contractors. In forwarding the papers on to the local European Assistant Forest Officer, the *mámlatdár* stated that such offences had become too common and therefore it was necessary that this case should be promptly dealt with by him (the European Assistant) in order that the example might have a deterrent effect. Three European Officers happened to be encamping in the *táluka* at the time, the Conservator, the Divisional Forest Officer, and the said Assistant Forest Officer. Yet none of them considered it necessary either to proceed to the scene of this wholesale plunder of public property or to hand over the case at once for trial to a competent Magistrate for which there was already a most complete *primâ facie* case made out. An inexperienced Sub-Assistant of the department fresh from school was entrusted with a preliminary inquiry *de novo*, and the rich offenders having now got a good start in these new proceedings against them, some of the men withdrew their statements, only a portion of those who had deposed before the *taláti* were questioned, the *taláti* was not sent for, and after such a perfunctory inquiry, it was decided to give up the prosecution and deal with the case departmentally. Such were the real facts of the case as disclosed in the papers produced by this same Sub-Assistant before the Commission, and yet he put forward the case as an example of the helplessness of the Forest Department to detect forest crime against a combination of villagers to conceal it. I took some pains to find out the real cause why justice was allowed to miscarry so flagrantly in such an admittedly typical instance of systematic crime, but even the Conservator, when personally questioned in regard to the inexplicable features of the case, had no satisfactory explanation to offer.

12. The entire tone of the forest administration of Thána in recent years as disclosed through the writings and proceedings of the head of the circle, is so stubbornly one-sided that there is small hope of an effective cure by conversion. We have tried to formulate our recommendations so as to militate in the least degree against effective conservancy of the forests consistently with the popular rights and privileges which have grown with the settlement and progress of the district, which are absolutely necessary for the continued well-being of a rural population like that of the Konkan, and which the people have uninterruptedly enjoyed with the willing consent of the present and former governments. In one part of the report [Chapter IV., Section II., paragraph, 87, page 77], the Commission has indicated the necessity of the loyal co-operation of the local forest officers, and of earnest exertions on their part to meet and smooth over all minor difficulties which the first introduction of the proposed arrangements must necessarily bring to light. Our recommendations however happen to be so opposed to what might be called the articles of faith embraced by the school of forestry which supervises the conservancy operations in Thána, that I for one entertain no hope of securing anything like cordial co-operation on the part of any one who prides himself as the apostle of that faith, and who allows himself to fall into such extravagancies as to prophesy, in all the seriousness of official reports, the utter destruction of the Bombay harbour as among the least evils, if his scheme for a wholesale adoption of the European Continental systems of forest conservancy be not at once adopted here. A concord between the two executive branches of administration seems to be hopeless when we take into consideration the fact that one of the chief characteristics of such one-sided advocacy is the ostentatious disregard of all other interests which in the agricultural

Konkan districts happen to be most paramount, and which demand a rigid subordination of all forest conservancy to the continued remunerative cultivation of the soil. A policy of prevention suggests itself as the only alternative if the past virulent strife is to be effectively laid for ever without further unseemly struggle, and if a fair chance is to be given to the success of the recommendations of this Commission.

13. I wish to add a few words regarding the several recommendations made in this report. In paragraph 20 of Chapter XII., page 204, it is pointed out that, as a whole, they are intended to be one homogeneous scheme of an ultimate settlement, that the scheme has to be considered as a whole, and that the rejection or material modification of any part of it would destroy the efficiency of the rest. I would beg to emphasise this important representation here, as I did during our discussions in committee, and I beg respectfully to urge on the attention of Government the fact that the several proposals represent the residue, after each one had separately undergone a process of chiselling down in order to render the whole workable and acceptable to the Government, consistently with the main object of attaining eventually an equitable and permanent settlement of the diverse interests involved. The success or otherwise of those proposals would entirely depend (1) on their acceptance in their entirety in the spirit in which they are made, and (2) on the ensurance of effective concord by some such process of prevention of evil as I have taken the liberty to discuss in the preceding paragraph.

14. Although I have agreed to the several recommendations as the result of our inquiries, I do not quite agree with the process of reasoning adopted in arriving at some of them. For instance, the executive Government is virtually the maker of the land revenue laws and codes of the country, the landholders, though parties to the contract which these laws are intended to regulate, having no voice in the framing of them. It has been the policy of Government to strengthen the hands of the executive by vesting them with discretionary legal authority to divert communal village lands from one specific object to another, leaving the local interests affected by such legal diversions to be provided for by such small mercies as a "moral obligation" to do so may dictate. Instances of how these moral obligations have been practically recognised and fulfilled or lost sight of abound in the official literature relating to the application of the Forest Act of 1878 to the Konkan, and in the proceedings of the youthful Forest Settlement Officers of four or five years' standing in the service, appointed to adjudicate upon civil rights of such magnitude that in other departments the District Judge alone is considered competent to try them. In other presidencies these duties are entrusted to officers of the standing of a Collector, who are appointed there as Forest Settlement Officers. Further, how were the legal maxims or common law that "prescription does not run against the Crown," or that "trees go with the land on which they stand," applied to practical questions which arose in these same districts? This common law was applied in some such executive fashion. Such prescriptive rights which had grown with the growth and settlement of the country, which were specifically recognised in all village revenue transactions, which were at one time fostered and directly encouraged by specific orders of Government for their extension, were summarily brushed away literally by running the pen through their record which was treated as manufactured without authority, the individual owners concerned being shown to the law courts for a remedy if they felt aggrieved. I therefore prefer to base the proposals of settlement on the popular rights and privileges which have necessarily grown with the settlement and growth of the communities affected, holding as I do that the legislation is defective which injuriously affects such rights and privileges by leaving them to be dealt with at the discretion of the executive as a mere "moral obligation," at best an indefinite quantity necessarily varying with personal opinions and idiosyncracies.

15. There is another point of difference of opinion which I wish to notice. The official distinction which has been drawn since 1863 between a "forest" village and "non-forest" village as the basis on which the forest claims of the people are to be considered, appears to me to be wrong in fact. The entire history of these districts proves that the village boundaries such as those found and

recorded at the survey are simply arbitrary and almost accidental divisions adhered to for general administrative purposes only, the villages surrounding a forest having, by common consent, resorted to it as the shortest way of providing their requirements of forest produce, without reference to the artificial line of division which may include such forests within the limits of one or another of them. Such is also the burden of the evidence given before the Commission. As however most of the provisions made in our proposals indirectly ensure a continuance of proved customary rights in forests without a rigid restriction to village boundaries except in the question of *ráb*, I have not thought it necessary to record a dissent from any of those proposals, trusting that the general spirit of justice and equity in which the wants of these rural populations are to be met, will duly recognise the customary rights of any village coming within the arbitrary category of a "non-forest" one, if the people were found to have always depended for their *ráb*-supply on the forest in their immediate vicinity.

16. The peacefulness and the patience of the people under grave provocation which I have alluded to above in paragraph 9 have an explanation. It was only apparent and entirely due to the salutary influence exercised over them by the Pándharpeshás (superior holders) and other influential landholders. I have discussed freely these points with all classes of the people, and I am quite convinced, that but for these influences exercised on behalf of constitutional means to obtain justice, serious disturbances and even bloodshed in various parts of the district had been imminent. Undoubtedly, the strong hand of the Government could have speedily put down any such breach of the peace; but, nevertheless, such indigenous forces as were effectively used on behalf of peace and quiet need not be utterly disregarded or undervalued even by the strongest government. There is another fact which calls for special attention in connection with this phase of the question. The indefatigable and disinterested exertions of the educated classes of the Northern Konkan on behalf of their ignorant and helpless countrymen deserve prominent recognition. At the solicitations of the influential men above referred to and with the help of subscriptions willingly paid by the people, the leading men of those classes consistently pursued a course of constitutional agitation and representation which ultimately had the effect of inducing Government to appoint the present special Commission to inquire into the grievances regarding which the people had been clamouring in various ways and with varied results for nearly a quarter of a century.

KRISHNAJEE LAKSHMAN NULKAR.

20th March 1887.

APPENDIX.

RICE CULTIVATION IN THA'NA.

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RICE CULTIVATION IN THA'NA.

Nágli = Eleusine corocana.
Varai = Panicum miliaceum.
Pakka (= Burnt) *ráb.*
Salt-marsh rice.

In the Thána and Kolába Districts rice, always continuously, and nágli and varai in rotation with other crops and intervening fallows, are grown from seedlings raised in a thickly sown nursery, usually prepared by burning layers of cowdung, tree-loppings, shrubs, leaves, grass and clay in various combinations. Salt-marsh rice is sown direct in the land where the plant is intended to grow till harvest. In places near the sea-side, where fish manure is cheap enough, a dressing of pounded dried fish is used for the seed-bed for sweet rice, though this practice is not successful except in the year following that in which some of the substances above enumerated have been burned. The same may be said of various oil-cakes which are similarly used. The seed-bed for rice (though never for nágli) is sometimes prepared without burning. It is then either fertilized by folding sheep, or advantage is taken of the natural drainage, rich in manurial substances, from village sites to prepare seedlings without any direct manuring. Where the seed-nursery is not burnt, the seed is sown in two ways. Either the paddy is thrown broadcast on to the manured seed-bed and ploughed in or else germination is first artificially induced, and the seed thus sprouting is carefully broad-casted on the seed-bed—reduced by ploughing and harrowing, while inundated, to a level mire and left to grow as it falls. But the prevailing practice is to burn the seed-bed, and is locally signified by the word "ráb." This word is also used to denote the material burnt. It literally only means "cultivation." The local cultivation by burning has induced the special and now ordinary use of the term.

Dried fish, *kuta*, *literally pounded.*

Oil-cake = *pend.*

Kachcha = Unburnt *ráb.*

Korad ute = Dry growing.

Chikhal ute = Mire growing.

2. It is supposed by some that this preparation of the seed-bed is peculiar to the Konkan, and it was certainly so presumed by Government in 1856, and being so presumed was condemned without enquiry as a wasteful practice, in so far as it made demands on the hill-lands and forests for brushwood and tree branches.

Ráb cultivation condemned on analogy.

3. Rice is grown in other parts of the Presidency both with and without ráb.

Dry-crop rice.

In parts of Gujarát it is drilled in dry-crop land in rows with cotton or jowári. In Dhárwár it is drilled in terraced rice fields; and, if the rain is not favourable, it can be ploughed up and replaced by jowári, a dry-crop millet. It is sometimes intersown with jowári. I quote these instances to show that though rice is essentially an aquatic plant, it can under certain conditions be grown as a pure dry-crop and is actually so grown in this Presidency. It may be stated that rice is also extensively grown all over India except the Konkan from seedlings raised in a manured nursery, though without any burning.

4. Admitting these facts, it does not seem to me to follow that, because cultivation of rice is profitable in some places without ráb, the resort to it in others is unjustifiable or even fairly questionable. No fair presumption is raised, sufficient to throw the burden of proof on ráb cultivators. Rather does the burden lie on those, who, in the interests of forest conservation or otherwise, wish to throw doubt as to the soundness of the practice.

The burden of proof lies not on the *ráb* cultivator but on those who condemn the practice.

5. The duty of settling the ráb question has been imposed on the Forest Commission, and by them I have been deputed to draw up a memorandum to set forth the facts of the case and such experimental results as, in my capacity of Director of Agriculture, I have secured.

The object of this memorandum.

The essential features of *ráb*—
1. Transplantation.
2. Burning.

6. Ráb cultivation exhibits two important features—

(1) the transplantation of seedlings, and
(2) the burning of the manure.

TRANSPLANTATION.

Objects of transplantation.

7. The question arises as to whether the rearing of seedlings for transplantation is good farming. If so, what objects are attained?

It would be rash to condemn transplantation. It is practised all over the world. Cabbages and tobacco are always transplanted, and I do not think a good farmer would allow that he could obtain equal results in any other way. Yet it is suggested by some that the practice of drilling or otherwise growing rice should be insisted on in Thána.

(1) to induce tillering.
(2) to check tendency to growth to straw.

I think that the objects of transplanting rice are to induce tillering and to give a check to the growth of the plant to prevent its growing to straw rather than to grain. Tillering in cereals is the spreading of the plant by layers. The first stems or culms ascend vertically, but subsequently other stems issue whose growth is for a time horizontal. They thus come in contact with the soil and emit roots from their lower joints. From these grow new stems. The plant, taken from the seed-bed, is buried deeply, bringing the side shoots into intimate contact with the soil and thus inducing tillering. Each new stem bears an ear of grain, and the more the stems the larger the yield. Rice being an aquatic plant grows most vigorously when liberally supplied with moisture, but the tendency is to grow to straw, a tendency which is checked by the temporary distress induced by transplantation. It is well known that wheat is with the same object eaten down by sheep in England, or treated with a top-dressing of salt. In places where rice is drilled, *e.g.* Dhárwár, the same end is gained by rolling the young crop, before the nodes have formed, and before it would receive too great injury from the action of the roller. This rolling it may be noticed is only possible, when inundation is complete and where therefore too vigorous leaf growth would otherwise result.

(3) to prevent the young seedling from total immersion.

There is, however, in the case of a district like Thána with a very heavy rainfall another and a very practical object in first sowing the seed in a nursery. Rice, though aquatic, cannot stand immersion. The nursery is therefore necessarily on elevated portions of the field or even in dry-crop land outside the embanked rice land. The seedling remains there till it has made a fair start in growth.

(4) to secure healthy germination.

Again were the seed sown by the drill—if possible—or even broadcasted in the embanked fields, the germination could not be successful, for clearly the warmth necessary to germination could not be secured in water-logged land. No drill could work in the mire of the Konkan rice fields, which are circumstanced very differently from the terraced fields in Dhárwár and elsewhere—where the crop is drilled—for there the rainfall is either less heavy or else the drainage more at command or both. Before the fall of the early monsoon rain the rice fields of the Konkan are as hard as brick. Ploughing cannot begin till the soil is softened. If the land were all ploughed and harrowed before sowing the seed, the crop would be left high and dry in its ripening stage. I think these remarks are sufficient to justify transplantation in the Konkan and to indicate the futility of any attempt to imitate Dhárwár at all events. It may be added on evidence from all sides, including that culled from the Statistical Reports of Bengal, that transplanted rice yields not only a better crop but also that with transplantation all the finest varieties of rice are grown. This is consistent with the opinion and practice of the Bombay Presidency. The variety of rice depends not only on the depth of soil, but on the method of cultivation. Position and water-facilities are other factors.

(5) to gain time to prepare the land.

(6) to grow the finer varieties of rice.

THE BURNING OF THE MANURE.

Reasons why burning is necessary.

(1) The seedlings must get the full benefit of the manure.

(2) The burning prevents the soluble constituents of manure from being washed out.

8. The stay of the seedling in the seed-bed is short, and the full benefit of the manure for the best results must necessarily be secured by converting it into its most assimilable form. But at the same time, if the ingredients necessary for the young plant, which are undoubtedly potash and phosphoric acid above all others, are not fixed in the soil sufficiently to prevent their being washed out by the action of rain and running water, they will, it is very easy to see, be of little use to the seedling. I believe that the burning of the manure has precisely the desired effects. I am not able confidently to explain how the burning fixes the ingredients sufficiently to resist their being carried off in solution in the water passing through and over the soil and yet to be readily available to the plant. The potash in ash residue is extremely soluble. I think that there is ground for believing that it is fixed in the form of double silicates of alumina and potash, the combination being accelerated by the burning. Phosphoric acid readily forms insoluble compounds.

As to the practical results there is experimental evidence. A seed-bed was treated liberally with an artificial manure patented by Professor S. Cooke of the College of Science—prepared by dissolving bones with caustic potash and lime and thus rich in phosphates, lime and potash. The area transplanted from the seed-bed was *exactly the same as that from an adjacent plot, which received no manure at all.* The only explanation is that the soluble potash was washed out and gave no nutriment to the seedling, though it was applied as a top-dressing after the seedlings had made a start. This experiment further proves that it will be extremely unlikely that any artificial manure can be profitably substituted for ráb.

Loss of nitrogen and carbon—not material.

9. At the same time the burning causes a complete dissipation of all the volatile organic matter in the material burnt, and drives off all the nitrogen in the form of ammonia—in whatever combination or form the nitrogen may have been present before the burning. It moreover causes the loss of these ingredients both in the layer of soil underneath the *ráb* material which is brought sufficiently within the influence of the burning and in the layer of clay or fine earth which is placed over the other *ráb* material, chiefly to secure slow combustion. The plant needs little nitrogen in its early stages and though this element is all important to its development and final maturing, it needs little observation to satisfy any one that in some way the plant is well and fully supplied. The source may either be the rain water or the nitric acid formed by the process of nitrification in the soil or as suggested by the Conservator of Forests by the absorption of ammonia by the black burnt surface of the seed-bed.

The sufficiency of nitrogen is evidenced by the rich green colouring of the leaf, and this evidence is, as far as I have seen, satisfactory. As regards the loss of organic matter in the burning little need be said, for the only source of supply of carbon to plants is the carbonic acid in the atmosphere. Organic matter, however valuable in soil mechanically, is not as far as its carbon is concerned, directly useful as plant food.

Clubbing in cabbages.

10. I may note here a curious fact, which may or may not have a bearing on the *ráb* question. A disease in cabbages—called "clubbing"—is attributed to an excess of nitrogenized matter of the soil, accumulating in the root of the plant, or perhaps to a deficiency of potash, and is remedied by the addition of wood ashes.

Further experimental evidence as to benefit of the burning.

Cowdung ráb and manure compared.

11. I have further direct experimental evidence as to the beneficial results of the burning. In 1885-86 plots at Lonávli and Khadkála, manured with cowdung burnt on the seed-bed, gave a yield of 1,545 lbs. and 2,822 lbs. grain respectively—while plots in the same places treated with pit manure and cowdung, both unburnt, gave only 730 lbs. and 1,873 lbs. grain respectively. I gave spe-

cial attention to this point in the experiments now going on at Karjat. Here one plot was rábed with cowdung with layers of grass and earth. Another, side by side, received only cowdung not burnt, but the quantity was 1½ times as large. The crop is not yet reaped. The latter plot produced seedlings for 4 times, but the former for 6½ times its area. The appearance of the seedlings at the time of transplantation was very remarkable and left no doubt in the minds of those, whom I called to observe, that at any rate the burning of the manure is fully justfied.

Other benefits of burning.

12. I do not intend it to be supposed that the benefits of the burning are confined to the results shown above. I will enumerate other most undoubted benefits.

(3) Burning increases the available manure.

The burning increases the available manure, present in the soil itself, provided it is not carried too far. This benefit is particularly important in the case of clay soils, which always contain some and often much, potash, besides lime and phosphoric acid and these in very insoluble combinations—which are broken up by the burning. This result is secured not only in the soil of the seed-bed, reached by the burning but in the upper layer of earth most usually placed over the grass layer.

(4) Sweetens the soil, destroys grubs and parasites.

13. It purifies, sweetens and cleanses the soil, breaking up and driving out injurious acids, destroying grubs and parasites of various kinds.

(5) Improves the texture of stiff soils.

14. It improves the mechanical texture of clay soils. With this end in view clay burning is largely resorted to in England. It is of special importance in the cultivation of rice where the seedlings are transplanted, and is used as an argument for ráb by the cultivator himself, who urges that where the seed-bed has been rábed, the plants come away easily and are not injured, whereas where no ráb has been used the rootlets are broken and the vitality of the seedling endangered.

(6) Prevents weeds.

15. It destroys the seeds of weeds, thereby preventing them from coming up and choking the young rice, or at any rate eating the food the rice would otherwise secure. It has been by some supposed that I have invented this theory in support of ráb and that it is a fanciful one. I would state then that the argument is the one first brought up by every ráb cultivator I have met. It was noticed by a Survey officer (Mr. Day) in 1853 while he was studying the rice cultivation of Thána. He described the action of the burning as "effecting the destruction of weeds and noxious herbs, and at the same time much increasing the productiveness of the land, operating thereto as a manure." In America the seed-bed for tobacco is generally burned. In a standard work on American agriculture I find that the principle is laid down that, save under exceptional circumstances, "the seed-beds should be burned with a heavy coating of brush," the reason being given that the "plant is small and slow of growth in the early stages of its existence and is easily smothered by weeds." The rice plant is not slow of growth but the same liability to injury from weeds exists. The meaning of "brush" may be illustrated by an extract from a note received from Mr. Cabaniss, Assistant Director of Agriculture, British Burmah. "In America where I have always used it (ráb) on tobacco seed-beds, I simply piled brushwood and logs on the land to be prepared to a height of about 3 feet and then set it on fire." My enquiries have shown that one of the commonest weeds, against which the rice cultivator has to fight, is the rice which springs from the grain of the former year's crop shed at harvesting. This rice will not tiller. It produces an inferior grain—red in colour—which greatly depreciates the value of the sample, into which it finds its way. It can with care and labour be separated at transplantation time; but meanwhile it has eaten much manure. But in districts of heavy rainfall weeds of many kinds are enormously abundant. They are indigenous to the soil and greatly impede the healthy growth of the seedling. They can be weeded out with care and labour, but not till much harm has resulted.

Vide p. 14, Deposition of Witness No. 5, Karjat Táluka.

16. On this point the experimental results are very explicit. Plots of seed-bed rábed with various materials, aggregating 8 gunthás gave 88 lbs. of weeds to the weeder, while plots—amounting to 4 gunthás, of unrábed seed-bed, produced 146 lbs., or in other words 440 lbs. and 1,460 lbs. respectively per acre of seed-bed. Of the former, those plots which were rábed in accordance with local custom showed only 80 lbs. of weeds to the acre, while of the latter, those top-dressed with artificial manure and oil-cake gave just one ton.

Experimental evidence.

Limits of Ráb.

Chiefly confined to West Coast of India and region of heavy rainfall along the ridge of the Western Gháts.

That is tracts (1) of heavy rainfall.

17. The question now arises—if the burning is so remunerative and beneficial, why is it not the universal practice? In replying to this question I would review generally the limits of ráb.

The conclusions at which I have arrived are generally stated as follows:—

The area of transplanted rice is very much more extensive than that of rábed rice; in other words the seed-bed is prepared by simple manuring without burning all over India, whereas ráb appears confined to districts on the Western Coast, and above gháts in tracts where the proximity to the gháts induces a very heavy rainfall. I believe that the rainfall is as heavy, perhaps heavier, in places where ráb is not known—British Burmah for instance. The total fall is therefore not the only factor. I believe that the distribution of the rainfall is nearly as important.

(2) Of heavy continuous early monsoon rain with early cessation.

18. The peculiarity of the rain on the Western Coast is its intensity and continuity in the early monsoon—and also its early cessation. There is another factor, as regards the distribution of the rainfall. In the south of the Presidency the ante-monsoon storms are heavy and allow the sowing of rice early in May. The moisture is not excessive and in such tracts rice may be drilled or sown in seed-beds manured but not rábed, without risk of inundation in the former case, and without danger of inundation coupled with loss of manure in the latter. The Konkan districts of Bombay are therefore peculiarly circumstanced. Drilled rice would be inundated and lost. There is no rain in May; but a continuous downpour in June and July. If the sowing were delayed till the cessation of the first heavy burst of rain, the crop would be high and dry in the later stages of growth, at a time when a full supply of water is essential.

(3) Out of reach of north-east monsoon rain.

19. Again in certain parts of the Presidency (Dhárwár, Kolhápur and Belgaum) there are tracts which are favoured with the north-east as well as the south-west monsoon rains. In such it is quite possible that the sowing may be delayed and the seed-bed cleaned, first by encouragement of weeds, and then by their destruction, before the seed is sown. I do not know that such a practice is anywhere actually resorted to. But at any rate it would be futile in the Konkan which receives no north-east monsoon rain.

(4) Without water-storage facilities.

20. Lastly in Dhárwár, Belgaum and I may add parts of Gujarát there are unusual facilities for storing water. In such ráb may be avoided, but no storage supply exists in the Konkan. Whether it could be effected is a question on which I cannot give an opinion. I think therefore that the Konkan is peculiarly circumstanced and that all the peculiar conditions that exist tend to show that ráb is an essential factor in rice cultivation.

21. I have received a valuable note from Mr. A. P. Young of the Survey Department as regards Kolhápur, which I here re-produce.

RA'B IN KOLHÁPUR STATE.

Agricultural Districts of Kolha'pur.

"Three distinct zones of agricultural distribution are to be recognised between the western and eastern boundaries of the State.

In the westernmost villages adjoining the ghâts the soil is generally poor. It appears to contain little organic matter, and consists mostly of the disintegrated laterite here highly developed as a capping layer of the hills dividing the narrow valleys. Rice is the chief field crop and is cultivated by transplantation from seed-beds. The area of Vaingan (hot season rice) cultivation is small in proportion. Moving eastward from the ghâts the valleys become broader and the soil darker and richer, being derived more from the decomposed basalt, and probably richer in organic matter. The method of cultivation is still "Lavani" or transplantation, the finest varieties and richest crops of rice being grown in the eastern portion of this belt the limit of which may be placed at about 12 or 14 miles from the nearest point of the ghâts. The whole of this belt of country is a region of evergreen forests. At the boundary indicated, a few miles east of Ajra and Bhudargad, the character of the agriculture as also that of the natural vegetation changes somewhat abruptly and completely. The transplanted rice is replaced by drilled rice, and dry-crops begin to be cultivated in fields (jowari, bhuimung, &c.). The evergreen forests disappear and deciduous forests, in which teak thrives, take their place. The agricultural and botanical boundaries thus coincide approximately perhaps not exactly, and both boundaries are no doubt determined by similar if not identical changes in the amount or character of the rainfall.

Interesting modifications of rice culture appear in the eastern portion of the drilled rice or teak zone. *Mhásad* is a coarse rice grown in fields not perfectly levelled, and in which the embankments are far apart. Inferior kinds of rice are also grown on land naturally level and without embankments, the rice being sown in alternate rows with jowári or some dry-crop.

This teak belt includes Kapsi, Nesri or Daddi, and may be some ten miles in breadth. Proceeding eastward the teak is left behind and the fields are found to be cultivated exclusively with dry-crops. The boundary of the drilled rice is not so sharply defined on the east (towards the dry-crops) as on the west (by the "Lavani" cultivation) and possibly the teak boundary does not coincide so nearly with the agricultural boundary between drilled rice and dry-crop; and it may perhaps be questioned whether the eastern limit of teak is a truly natural one. Nevertheless other changes in the flora indicate a natural if not a very sharply defined botanical boundary. Among these may be quoted the eastern limit of *Arundinella tenella*, a grass growing abundantly as a weed in the cultivation of the drilled rice country, the western limit of *Pulicaria wightiana* a common weed spreading far east in the dry-crop district which constitutes the third agricultural zone.

The same boundary is probably indicated by the western limit of *Perotis latifolia* a feathery grass abundant in sandy soils derived from quartzite; this species is common at Sudgatti but is not found far west of that village;— also by the western limit of *Mundulea suberosa* a shrub common in the quartzite hills from Sudgatti to the east.

Tarwa = *ráb.*
Náchna = *nágli.*

The *tarwás* in the transplanted rice district are of branches and are fired in May before the heavy storms—and the seed is sown soon after. Náchna is grown from seed-beds in the western portion of this district, here it is a kumri crop. Kumri* is practically almost the only cultivation representing dry-crop in this district. "Tisáli land" requiring two or three years of fallow replaces kumri farther east, that is to say, in the western parts of the drilled rice region. Still farther east fallows are no longer necessary.

The above is written from memory and is perhaps all that is worth saying on the subject at present. A good deal might be learnt by a few backward and forward journeys between ghât and dry-crop region made during cold weather in order to compare the botanical and agricultural boundaries."

Dhárwár, 11th September 1886.

Mr. Young's observation corroborates the conclusions at which I have arrived as regards the influence of the rainfall on ráb.

Exception to rule that ráb is needed on the west coast—Gujarát.

22. Parts of Gujarát do not appear to tally with the conclusions above stated.

The Par divides Surat into 2 parts. North of the river rice is grown on land assessed as high as Rs. 20 per acre, on the transplantation system and on embanked land as in Thána, but without ráb. South of the Pár, but still in the Surat district, the seed-beds are rábed invariably with cowdung and stubble, and very occasionally with loppings (I saw loppings used at Párdi in one case this year), but loppings, brushwood and shrubs are very scarce. The country about Párdi looks like another Thána almost completely denuded of tree-growth, except fruit

* *Kumri* consists in felling an area clean and burning the material *in situ*. The whole area is sown broadcast and the plant left to ripen where it takes root.—E. C. O.

trees, which are not plentiful. A little further south the Thána district begins, where ráb is the universal practice—with the few exceptions given in para. 1.

This tract was specially brought to my notice by the Acting Commissioner Mr. Mulock. I interviewed a Patel from Balsár north of the Par, described by Mr. Mulock as one of the best farmers there. In the first place I found that in his village out of 550 bighás of rice and garden-land rice is continuously grown in only 50. In another 100 it is taken in rotation with sugarcane and pulses. In the rest cane is the principal crop, and is grown in rotation with pulses, oil-seeds and nágli. No ráb is used. The reason given by the Patel was that the *kodra* straw* and other refuse by-products are absorbed as manure for hemp, grown as a green manure for the sugarcane, and are not available for ráb. Similarly all the manure produced by the cattle is devoted to the cane crop, except a little used to manure the rice nursery. The Patel admitted that the area planted out from a seed-bed is larger when the manure is burnt, and the seedlings stronger and more healthy; that without ráb the weeds so weaken the rice as to necessitate top-dressing with oil-cake or fish manure, besides much labour in weeding, and that cultivators without garden land would burn ráb (or *adhar* as there called), if they could afford the cost of top-dressing—which though not always necessary must be provided if required. The explanation therefore in this case is the small proportion of rice and its small importance compared with cane.

Further exception though of an opposite character.

Sasseram in Bengal.

23. Transplanted rice is grown with ráb in the Sháhábad District of Bengal, in Travancore and Cochin of Madras, in South Kánara (to a limited extent), but not in British Burmah, the Central Provinces or Assam, though in other parts of Madras than those named and in the Central Provinces, the analogous practice of kumri as it is called in this Presidency, is common for rice, (of an inferior kind) as well as for kodra. Sasseram in Sháhábad seems to show an exception of a character exactly opposite to the exception shown by South Gujarát. I do not know the peculiar circumstances of Sasseram to explain the exception, but the description therefrom received is of interest. Whole trees of diameter under 6 inches, of the kinds marginally noted, are felled in February and left to lie till May. They are then removed to the seed-bed for rice and *marua* (=nágli in Bombay), placed side by side in lengths of 5 feet and burned. About 100 logs are required for the seed-bed for a bigha. The cultivation is called *dába*. It is very similar to ráb, and it is noticeable that the ain—which is the first-named tree used for dába cultivation is that most prized in Bombay for ráb, and that the ráb is used for *the* two crops which demand it in this Presidency. The loppings with the preservation of the leading shoot of the tree are only legitimately used in Bombay, but in Sasseram the tree is cut down. It is added that in the plain tracts of Sasseram, paddy and marua seed-beds are carefully manured with cow and sheep dung and wood ashes. Dába is confined to the plateaus. The dába cultivators do not use cowdung and Mr. Rostan, Head Assistant to the Director of Agriculture, Bengal, who has favoured me with the note from which the extracts above are made, adds :—

Terminalia tomentosa, Boswellia thurifera, Buchanania latifolia, Acacia catechu, Zizyphus xylophora.

Dába cultivation; its merits and suggested limitation.

"24. The truth seems to be that the dába cultivators have been so long accustomed to using wood ashes that they have never had any occasion to test practically the use of other substitutes. In some cases, it is true, cowdung has been tried, as in Rebal since the jungle there was constituted a protected forest, and it would really seem from the result of the trials that it is not so efficient as wood ashes. In the plains sheep and cowdung are the favourite manures for seed-beds, and it therefore appears that there is something wanting in the soil of the plateau, that is supplied by the constituents of trees. On the hills the seed-beds are in hollows and unless the seedlings are forced they will not be large enough and vigorous enough to survive the flooding that takes place when the rains commence; and weeds grow so rankly that they will overwhelm the seedlings unless the latter are forced on by the application of a manure like wood ashes that specially suits them. The cultivators express

*The straw of kodra (Paspalum scrobiculatum) is poisonous to cattle and is not therefore used for fodder.

their value of dába manuring by saying that when it is used, a maund of paddy seed will give enough seedlings for 1¼ bighás, but if it is not used, it will suffice only for the planting out of paddy on half a bigha. On the whole I think that to prohibit dába cultivation would be a great hardship to the cultivators on the plateau; but their true interests in the long run would be best served by placing restrictions on the supply of wood for the purpose and allowing only thinnings and loppings to be used."

Are Tree-loppings essential in Ráb Cultivation?

Harm resulting to Forest Conservancy.

25. The most important question with regard to ráb, after it has been admitted to be sound cultivation and not replaceable by other methods as far as yet shown or known, is whether tree-loppings are essential. It is the burning of tree-loppings and the consequent denudation of hill sides by their use at a rate with which reboisement cannot keep pace, which has brought the ráb cultivator's farming into question and led to attempts to show by analogy, by abuse of his knowledge of farming, by appeals on behalf of conservation, and by warnings as to the results of denudation, that ráb as far as it is concerned with loppings and brushwood should be stopped. Abuse is a poor weapon and analogy a very treacherous one which has in this case been useful to repel the attack made with its aid. But the interests of forest conservancy, especially when these coincide with the true interests of the ráb farmer, demand the most earnest attention.

Ingredients of ráb.

26. It may be explained then that ráb is usually made of layers of (1) cowdung or loppings (including brushwood and shrubs) with superincumbent layers of (2) grass or leaves, (3) fine grass, broken leaves, or bruised rice straw and rice husk, *harik* or *kodra* husk or straw, or other similar finely divisible by-product to serve to prevent the (4) upper layer of pulverized sifted earth from falling down during the burning. In places well-kept pit manure serves as the principal layer coupled with loppings or brushwood, the amount of which latter is proportionately less. But pit manure badly kept or cowdung kept in the open in the monsoon is only useful for mixture with the top layer. Where loppings and brushwood are plentiful the material is used to cover the ground sometimes 3 feet high—but it is just in these places that grass is scarce and is often omitted being replaced by a very large amount of loppings. Where sugarcane is grown and *gul* manufactured from it in Thána, the stalks replace loppings as the chief layer, and so where plantains are common, the leaves replace the 2nd and 3rd layer, or one of them.

The part played by cowdung.

27. The cowdung is sometimes dried, made into cakes and broken up into small pieces over the seed-bed. In other places it is merely kept in the heap till required and then spread in pieces. Again it is a very frequent practice during the dry months for the farmer to send out the fresh dung day by day to be plastered over the surface. Where grass is very scarce cowdung ráb has no layer of grass, leaves or earth. But in this case the amount required is at least half as much again as when the subsidiary layers are used. My opinion is that except where loppings are plentiful and can be procured with great ease, cowdung is preferred as the main layer. The cowdung from the farm yard is the easiest material, but this supply does not go very far, because the cattle are driven out to pastures as soon as the grazing fails at home, and the droppings of April and May are kept for burning in the house during the heavy rains. These are not available for ráb, for it is dangerous to defer the burning too late in April.

28. There are places where the rayat with his wife or child goes out for 2 days to collect a cart-load of cowdung. There are others where owing to the plentifulness of loppings the cowdung is not used by the villagers themselves, but it is generally collected and carried off by outsiders from long distances. As a general rule I believe that the cowdung available is fully utilized by outsiders if not by the owners of the cattle which produce it. Sheep dung is available in a very insignificant degree. Formerly when sheep were driven to Bombay it was on the beaten tracks plentifully secured. Sheep are now folded on seed-

beds where ráb is not obtainable in sufficient quantity to meet the demand. Where a rayat uses both cowdung and loppings, he prefers to use the cowdung as ráb for nágli. As stated above where dried fish is available the land is rábed in alternate years, being manured in the intervals with the fish *(kuta)*. Occasionally oil-cakes, *e. g. karanz* oil-cake and others not edible by cattle are similarly used—but applied as a top-dressing after the seedlings have made a start.

29. It is considered by the people that cowdung ráb produces the best results, *viz.*, the area provided with seedlings from a given area of seed-bed, and the outturn of equal areas are larger. After cowdung ain is prized. I may say at once that, I believe, the preference for it rests merely on the ease with which it is cut and the fact that its leaves are more persistent, for experimental trials give no support to any intrinsic superiority of ain over other loppings. Some attribute its superiority to the large percentage of lime contained,—a percentage large enough to induce the manufacture of "*chunam*" for eating with betel-leaves, from its ashes. I think this proves nothing. Lime is not shown to be a requisite manure to the young seedlings; for the soil is well supplied.

30. The quantities of the various materials vary very greatly. Some assert that a good soil requires less than a poor one. I have not been able to test the assertion, but I question it. It is not a very important point practically.

It is desirable to make some estimate as to the requirements of ráb material per acre of rice. This estimate must necessarily be based on my experimental results. In each plot I have been guided by the best local advice as to quantity. I have experimented 2 years. The experience of the first taught a good deal and I think it safest to base the estimate principally on the 2nd year's experimental results.

I find that with cowdung as the chief layer the area of transplantation is 6½ times that of the seed-bed,—in other words 6·15 gunthás of seed-bed are required for an acre (40 gunthás) of rice. In the experiments of the previous year the figure found in various localities varied from 5 to 7½ gunthás. I think that 6 gunthás may be taken as a fair average. Similarly with ain and other loppings, as with brushwood and shrubs, I find this year the area slightly less. Last year the figure was somewhat larger and in cases much larger. Thus the results are yet not quite conclusive, but for the estimate, I think, it will be safer to give no preference to cowdung. To produce an equal result 2·3 tons of cowdung weighed perfectly dry (=10 tons fresh), or 2·15 tons of loppings dry representing 144 head-loads (a head-load = as much as a strong man with the aid of the carrying pole—*baila*—can carry) are required.

The amounts of the various kinds of loppings, brushwood, and shrubs were fixed by the head-load. The cost of cutting and carrying is considerable, and therefore it was more satisfactory thus to equalize it. The dryage was greater in some cases than others, but also the head-load varied owing to easier packing of the material. The dry weight however corresponded very closely with the number of head-loads except in the case of fángala—a shrub—where though the head-load was large the dryage was much greater. The figures are—

1	2	3	4	5	6
Material.	Bot. name.	Weight per head-load fresh cut.	Dry weight on fresh cut weight.	No. of head-loads for 1 acre of rice.	Weight dry for 1 acre of rice.
(1) Ain boughs	Terminalia tomentosa	61 lbs. ...	55 per cent. ...	144 head-loads.	4,800 lbs.
(2) Boughs of nána, bonda and dhávda.	Lagerstrœmia lanceolata, Lagerstrœmia flos-reginæ and Anogeissus latifolia.	61 " ...	57 " ...		4,800 "
(3) Uksi and dháiti brushwood.	Calycopteris floribunda and Woodfordia floribunda.	52 " ...	65 " ...		4,800 "
(4) Fángala shrub ...	Pogostemom purpuricaulis.	66 " ...	37 " ...		3,600 "

The grass layer for bough and brushwood ráb is double that for cowdung ráb, and amounts to 2 and 1 tons fully dried grass respectively.

31. The first point of remark is that the amount of cowdung, which it is possible to compare with that used in other cultivation is exceedingly small—though it is pure dung without any admixture of litter or stubble. The charge of extravagance in the use of dung cannot therefore be brought against the ráb farmer, and I think that by analogy a similar rebuttable presumption is raised in favour of his use of loppings, &c., and grass. I say this with confidence for the rayats who visited my plots argued that the amount I used was full and needed, though they could not often treat their seed nurseries with equal liberality.

The amount of seed in all the plots was exactly the same, *i.e.* 8 lbs. per guntha. In the case of the good varieties of ráb above enumerated, where I have taken the proportion of seed-bed to the acre of rice as practically the same, this gives a rate of 48 lbs. per acre of rice. I was assured by good cultivators that I might have got as good results on the best plots—cowdung and ain—by using a smaller amount of seed—say 6 lbs. per guntha; but my object was to make all conditions, except the character of the ráb, identical.

32. The first and most important deduction is that, as far as the proportion of seed-bed goes, as good results have been obtained by the use of brushwood and shrubs, as by the boughs of trees like the terminalias and lagerstrœmias which are capable of producing timber. As a fact the shrub of the meanest value, an annual which can be removed from the forests of Thána without loss and perhaps with actual advantage, gave in this respect better results than the loppings of good timber trees. In places where bough ráb is plentiful the people scorn the use of bushes such as *korinda* (Carissa carandas). This bush is very thorny and requires a large layer of grass to make it possible to tread it down evenly. It is not easy to use, and so far the prejudice against it is justified. It is very scarce in Karjat, where my experiments this year are being made, but it is plentiful in other parts of Thána. It is largely used where more easily manipulated material is not available, and I have little doubt will give as good results in respect of area of seed-bed as material more valuable from an economic point of view.

33. It seems best to notice here the experiments with other material, not used by the people, but more or less available and the use of which is more or less desirable in the interests of forests.

Euphorbia was tried last year. It burns badly. The amount required is very large and the results very poor. I did not even give it a second trial,—satisfied that for the above reason and because the material is not abundant, further trial would be waste of energy.

34. *Grass and leaves* were tried in various combinations, and with very good results. In one plot 1,300 lbs. of dried grass only were used per guntha of seed-bed, arranged in layers divided by layers of sifted earth.

The appearance of the duplicate plots at the time of transplantation was inferior to that of the recognized rábs above described, but the area of transplantation was equal to that of the cowdung ráb. In other words *as far as the proportion of seed-bed goes*, 3½ tons of grass gave as good results as 2 tons of cowdung and 1 ton of grass, or as 2 tons of loppings or brushwood and 2 tons of grass. This result was decidedly more favourable than the experiments of the previous year. It must therefore be accepted with caution, but it will not be unfair to base calculations, I think, on the supposition that cowdung may be replaced by 1½ times its dry weight of dry grass and loppings, &c., by an equal weight.

Grass combined with leaves was very carefully tried in a combination suggested by a rayat who stated that he had heard of its use as ráb thus:—

A layer of dried leaves was covered with grass, and that with well broken up leaves and a final top layer of sifted earth. The proportion of seed-bed to the acre of rice was found to be 7 gunthás. By this calculation 2 tons of leaves and 1½ tons of grass would be required to raise seedlings for an acre of rice. The

experiments last year showed that leaves and grass required 8 gunthás of seed-bed per acre. I think it may be taken that leaves used in equal weight with dry loppings and with as much grass as the loppings demand, would give fairly equal results. This is an estimate which Mr. Wilkins, Divisional Forest Officer, North Thána, has arrived at independently. Summarized, these estimates are as follows :—

35. Amount of ráb material required to produce seedlings for 1 acre of rice—

Cowdung ráb	... 2 tons cowdung ...	... 1 ton grass.
Bough ráb ...	... 2 „ loppings ...	... 2 tons „
Shrub ráb ...	... 2 „ shrubs ...	... 2 „ „
Leaf and grass ráb	... 2 „ leaves ...	... 2 „ „
Grass ráb...	... ...	... 4 „ „

36. As to the outturn of equal areas of rice under various kinds of ráb the experiments in progress have not reached a stage of completion sufficient to give figures. Those made in the previous year make it probable that the outturn will vary and perhaps considerably. The figures of the experiments of 1885-86 are as follows :—

Yield per Acre of Rice with varieties of Ráb.

Site.	Cowdug ráb.	Bough ráb.	Shrub ráb.	Leaf and Grass ráb.
	Lbs.	Lbs.	Lbs.	Lbs.
Lonávli	1,545	1,558	1,230	1,310
Khadkála	2,822	2,521	2,195	1,326
Igatpuri	1,885	...	1,680	1,841
Karjat	3,796	3,604	2,912	1,604

The figures are uniformly in favour of the locally considered better material, except as regards leaf and grass ráb at Igatpuri where the results appear abnormal. This is an important point, and the inequalities must be considered with the equality shown, if only the proportion of seed-bed is considered.

37. The President of the Forest Commission, the Survey and Settlement Commissioner and the Collector of Thána carefully inspected all the plots at the time of transplantation. I have considered it desirable to reproduce *in extenso* the opinions placed on record by them. These opinions with the explanatory note prepared by me show all the results of the current experiments, as far as yet disclosed.

See Appendix A.

38. It will be noticed that reference in these opinions is made to varieties of ráb and ráb substitutes which I have not yet discussed.

These are attempts to gauge the value of substitutes for ráb, which under peculiar conditions are practised in Thána ; and also attempts to utilize artificial manure for the manures used with such substitutes by the people ; and lastly an attempt to test the wisdom or otherwise of the rayat, who does not cultivate the seed-bed before spreading the ráb material.

Chikhal ute is a method of sowing sprouting seed in a seed-bed liberally manured and thoroughly cultivated by ploughing, cross-ploughing and rolling, to secure an even surface while the seed-bed is inundated. Cowdung is, in Thána at least, never used for this cultivation. Sheep are folded where available, but for the most part sites are selected which are fertilized by drainage from the village.

Korad ute differs only in that the seed is sown earlier and is not treated to induce germination before sowing. The seed-bed must be well manured and carefully cultivated as in the case of *chikhal ute*, and levelled, after the rain has softened the soil. In both cases the first ploughing tends to destroy weeds which have already come up. The advantage of the *chikhal ute* is that the

last ploughing is delayed till weeds encouraged by the first have sprung up. The seed-bed is thus thoroughly cleansed. This result is not so well secured in the case of *korad ute*. On the other hand the later sowing of the *chikhal ute*, though as far as possible by artificial assistance the time lost is made up, yet transplantation is delayed. In the experiments at Karjat I was able to sow the *korad ute* plots on 5th June, but the sowing of the other was not possible till the 26th. The seedlings in the former were ready for transplantation on the 10th July, in the latter not till the 29th July, while seedlings grown from ráb were ready on the 2nd July, though sown on the 4th June.

39. These systems of cultivation, though little valued in Thána, are deserving of careful attention at the present time, when so many suggestions are received as to the advisability of imitating in Thána the modes found feasible in other localities for cultivating rice. Both systems are largely resorted to in the North-Western Provinces, British Burmah, Bengal, and Madras—though where the seed is not first sown in a nursery, the whole field is manured, and is sometimes manured as well as the seed-bed itself. It is reported from South Kánara that leaf and twig manure either by itself or trodden into a compost with animal products, by being used as litter in cattle sheds, is universally used as manure both for seed-beds and for the outside fields. Sometimes this compost is burnt and the ashes "*suda manna*" (literally burnt earth) are applied, and sometimes this burning takes place on the seed-bed—when it really becomes ráb within the ordinary meaning of the term.

By Fuller and Duthie.

Both systems are described, though not with the Thána names of course, in the "Field and Garden Crops of the North-Western Provinces," where it is said that the seed-bed is $\frac{1}{20}$th the size of the field. With ráb in Thána it is nearly twice this size. I may also notice that transplantation is only resorted to in the North-Western Provinces when artificial irrigation is available after the monsoon has ceased. Such irrigation is not available in Thána.

40. In Thána these modes of cultivation of rice are exceptional, risky and very unprofitable when compared with *pakka* ráb. Such is the universal opinion of the cultivators—an opinion not to be despised and not to be disproved by invidious comparisons between the "thrifty" and "sturdy" Gujaráti and the "poor, lazy, thriftless Konkani given to drink and racked with fever." My experimental results fully support the opinion. In Khadkála, in 1885-86 I gave both the *chikhal* and *korad ute* a fair trial. The result was nearly total failure. The plots were washed over by heavy flooding. In the dry *ute* the seed either rotted as it lay or was washed out. In the mud *ute* complete immersion drowned the sprouted seed. Enough seedlings only were secured in the latter to plant out an area $\frac{1}{4}$th the size of the seed-bed and in the former $\frac{7}{8}$ths. This risk is always present in ráb tracts. In the current trials at Karjat I tried manuring the seed-beds with (1) Cooke's patent manure and (2) with *karanz* oil-cake, both used as a top-dressing in sites just below the village and therefore naturally rich. I also folded sheep on other plots. The results were as follows :—

Mode of Cultivation.	Proportion found of seed-bed per acre of rice.		
	Sheep folded.	Top-dressed with	
		Cooke's manure.	Oil-cake.
	Gunthás.	Gunthás.	Gunthás.
Chikhal ute	22	18	17½
Korad ute	13½	17½	12¼

The seedlings escaped flooding in the latter case, but heavy rain water-logged the seed-beds in the *chikhal ute* plots the day after sowing the sprouting seed.

The appearance of the seedlings was miserable, and a very poor crop will be reaped. As shown above weeds are prevented by the essentials in *chikhal ute* cultivation. In the *korad ute* plots the weeds taken out weighed from ⅓ to ½ ton per acre of seed-bed, being worst in the oil-cake plot. This is not so high a weight as that shown in the manured but unrábed plots described in para. 16: simply because the land was poorer.

The Conservator of Forests in his review of my ráb report for 1885-86 expressed regret that other systems of rice cultivation than ráb, experimentally tried, were not carried out in complete accord with the cultivation as locally practised in other places. My object was to test the local practices of the places where the experiments were made, and I took pains to use all locally known precautions and care as to the preparation of the land and the like. Further enquiry shows that in doing so I was virtually giving the fairest trial possible to the most usual methods of cultivation in non-ráb tracts.

It may be added that I did not put to the test the preparation of the seed-bed, by heavy manuring with cowdung and leaves and other vegetable matter, used as litter in cattle byres and ploughed into the land. This appears customary in parts of Kánara and in many places outside the Presidency. But the results secured with *chikhal* and *korad ute* do not raise any reasonable prospects of better success. In using leaves, grass and cowdung as he does, I think the Thána rayat secures better results—immeasurably better results, than he could by merely using them as manure.

41. It cannot have escaped notice that Professor Cooke's artificial manure has given no result, though tried in three different ways. I did my best to induce the Professor to indicate what he considered the most likely method of using his manure, but without success. I then submitted my notions as to how a manure, such as that patented by him could best be tried, for his approval, but again without securing any expression of approval or otherwise. I was careful in this matter, because Mr. Cooke himself made some experiments in Poona with ráb and his patent manure, which were described in a newspaper article as completely demonstrating the superiority of the manure over ráb. The "Indian Forester" was satisfied with the demonstration. I saw the plots, but considered that they proved nothing at all on the point at issue, because they were tried in a place where ráb is not practised and not necessary. My knowledge of ráb led me to expect total failure and the results corroborate my opinion. I must urge however that though this manure will not oust ráb, it is in its place a highly desirable and valuable manure for non-ráb tracts; but ráb is more than manure.

42. It is a remarkable fact that the Thána rayat does not cultivate the seed-bed before spreading the ráb material. It is a question whether he is wise or unwise. At Lonávli on the crest of the ghát above Thána, the seed-bed is usually carefully ploughed and levelled. At Igatpuri, similarly situated, the material is spread on the hard bare ground. The most usual explanation given is that the ground is too hard and ploughing impossible till the rain falls, and it is necessary that the ráb should be burnt before there is danger of rain. But it is urged that the rayat could raise the clods and leave them to weather. I tried this plan, because it seemed sound, and if it is sound there is no doubt that the Thána rayat has plenty of leisure to follow it. The results as far as disclosed are not favourable. In one set of seed-beds the cultivated plot, which had been dug one foot deep with the pick and left 3 months to weather and had been broken up and levelled before the rains, showed actually a larger proportion of seed-bed to the acre of rice than the seed-bed left untouched till sown, when the seed was ploughed in. In the duplicate plot however the results were decidedly better. On the average of both no advantage was apparent. There was a difference of soil in the two sets. In one the clods turned up showed no sign whatever of breaking down under the influence of the hot sun, and it was here that the cultivation of the seed-bed showed no profit. In the other the soil was more friable. In my enquiries I came to think it likely that the non-cultivation of the seed-bed was accounted for by the fact that it left the seeds of weeds on the surface, and therefore most obnoxious to the effects of the burning. Whether this theory is true or not, the experiments give it no support for the amount of weeds in the

cultivated plot was less than in the other. The appearance of the seedlings at the time of transplantation was much in favour of the cultivated seed-bed, and it is probable that the outturn may prove superior.

43. It is urged by the Conservator of Forests, N. C., that these experiments do not touch the real point at issue between the Forest Department and the ráb cultivator, which is whether branches of trees and brushwood are required for ráb. He considers that further experiments will be of no use, because he considers the question at issue to have already been "practically settled by the rice cultivators themselves, even in the Thána district, where in several directions rice is cultivated without the use of branches." This deduction is based on the statement that where ráb is required it can be made up of material which can be supplied by the forests of Thána in superabundance, *i.e.*, grass, leaves and shrubs, I presume. I am glad that the experiments give some data of ascertaining whether this conclusion is correct. But I would here make a few remarks on the review of my report by Mr. Shuttleworth.

He admits the correctness of my deductions (1) that the Thána rayat utilizes the materials which he employs for ráb in the most economical and in the most remunerative manner and considers that it is possible, as concluded by me, that all attempts to teach him to use the manure that he employs in any other way are extremely hazardous and require the utmost caution. He so far concurs with this deduction that he expatiates at great length on the good effects of the burning of the manure, adding that the black surface of the burnt seed-bed possesses a very great aptitude for attracting and absorbing ammonia from the atmosphere—a benefit which is I believe quite possible. He uses this argument to show the wisdom of the rayat in firing the ráb material early in the season, long before he can sow, though such early burning may result in a considerable loss by the ashes being blown off the seed-bed by heavy winds. I have been content to explain this fact by saying that it is dangerous to leave the burning too late for early showers would prevent proper combustion, and by showing that the grass and husk layers cannot be left unburned, because they would be preyed on by cattle. This applies to many ráb shrubs, *e.g.*, fángal, of which cattle are very fond. I think then that except in so far as the rayat burns tree-loppings, Mr. Shuttleworth considers his farming excellent, and the burning of manure by him an evidence of his sagacity.

Mr. Shuttleworth agrees with part of the 2nd deduction which I formulated in my last ráb report that rice can be grown without ráb, and that the ingenuity of the rayat has discovered substitutes. But he does not agree that it is proved that all substitutes yet tried are either more costly or more risky than the approved methods. His grounds for dissent is that he considers the modes of rice cultivation common in Dhárwár, Kánara, and elsewhere, especially British Burmah, could be introduced into Thána. One essential he considers is the previous cultivation of the seed-bed. On this point my experiments do not support him (*see* para. 42). As to the general point, whether other localities could be imitated with advantage, I have in the early part of this note given the pros and cons; and have shown that the Forest Department cannot hope for much from imitation.

Mr. Shuttleworth does not understand my 3rd deduction that though rice can be grown without ráb, yet ráb greatly increases the yield; but it appears to me a very simple statement and one fully borne out by the experimental results. My 4th deduction that if the full value of the ráb materials be charged to the cost of cultivation, rice cannot be grown with profit, has caused considerable questioning, but Mr. Shuttleworth had the report before him and could see exactly what was meant by "full value" and what items were included in the cost of cultivation. The utmost that can be said against this deduction is that it might be modified slightly thus:—If a charge for forest produce, required as ráb material, is levied on the material, *assessed at its value as ráb*, the margin of profitable cultivation will disappear.

Mr. Shuttleworth entirely disagrees with my conclusion that ráb is confined to districts of heavy rainfall. Thus stated the conclusion is wrong; but

it was not thus stated. The distribution of the rainfall and other factors were enumerated. I have discussed this conclusion at length in paras. 17 to 20 above. Mr. Shuttleworth's disagreement is based on insufficient knowledge of Kánara and Gujarát. As regards Kánara I was cautious. I have now reason to believe that Kánara is not so exceptional as my information then led me to suppose though not to affirm. Mr. Shuttleworth makes the bold assertion, "I have no hesitation in asserting that degrees of rainfall have nothing whatever to do with the presence or absence of ráb." He is absolutely wrong. He attacks the prevention of weed theory and finds no support in my experiments. I did not actually collect and weigh the weeds last year. Perhaps the figures now available will cause him to change his mind.

44. I now come directly to discuss the question put in the heading over para. 25. Are loppings of trees required for ráb? I have been long coming to the point, but as it is stated to be the point at issue between the Forest Department and the Thána rayat, it was desirable to prepare the way by disposing of minor points. I think then that in Thána loppings are absolutely necessary, because other ráb material is not sufficient to meet the demand for rice, nágli and varai. I am satisfied that grass, leaves and cowdung are insufficient. These with the aid of brushwood and shrubs from the forest areas will make not up the deficiency. It may be taken I think that in Thána and Kolába the Forest Department is now willing to concede for ráb all forest produce but the loppings of trees, which may be valuable as timber or especially valuable as firewood. The sufficiency of these materials and the conditions under which the supply should be made are subjects which the Commission must determine. I shall conclude this note therefore with such statistics as I have available.

In Thána the gross area cropped in 1884-85 by the regular statistical returns was 509,359 acres. Of this 320,897 acres were under rice, 67,288 under nágli, and 27,696 under varai, *i.e.* the areas requiring ráb were 81·65 per cent. of the gross area cropped—including that cropped more than once. The figures of Colába are practically the same. I have made no deductions for salt-marsh rice. The area is not very large. Nor for rice grown otherwise than by ráb which also is small. But even if liberal deductions are made, I do not think my conclusion will be greatly affected. With these figures I would compare Surat. Here the areas under rice and nágli amount to 117,285 of which nágli is credited with only 13,313. As far as figures are available 30 per cent. of this rice land is irrigable from tanks, water-courses and the like. The remainder, 72,780 acres of rice and 13,313 of nágli, (of which a great deal is grown in garden land) *i.e.* in all 86,093 acres, is comparable with Thána. This shows the proportion of rice and nágli in Thána and Surat respectively on the gross cropped area to be 81·65 and 15·64 per cent.

As to other parts of Gujarát. Kaira has 132,986 acres of rice of which one-third is grown with irrigation and of which a great deal is dry-crop rice. In Ahmedabad rice covers 66,459 acres nearly half of which is irrigable. Broach has 26,218 acres of rice nearly all of which is dry-crop.

Dhárwár has 152,181 acres of rice of which ⅔rds is irrigable.

Belgaum 109,042 acres of which ⅕th is irrigable, and of which a great deal is grown by ráb. These figures at once indicate radically different conditions for Thána and Kolába from what exist in other similar or somewhat similar districts.

I leave out Kánara because I have not yet sufficient data to go on.

The chief points of difference are that rice is either a comparatively unimportant crop or that it is a dry or semi-aquatic plant, or that its cultivation is largely aided by irrigation facilities, which at once place it above the needs of ráb in a large proportion of its area, or in all (as in Dhárwár); whereas in Thána rice and nágli are the staple crops, compared with which other crops are totally insignificant. I do not think any one would suggest growing cotton and wheat or jowári in Thána.

I find by experiment that a fully grown buffalo* will produce in 4 months enough manure to provide the dung ingredient for the seed-bed for ¼th acre of rice. A longer period than 4 months cannot be fairly counted on, if *all* the dung is taken credit for in that period. Therefore 4 head of cattle will be required per acre of rice and probably *nágli*. There are three lákhs of head of cattle of all kinds in Thána. Therefore only about ⅕th of the area is supplied from this source.

I have no data as regards leaves. Mr. Shuttleworth's estimate that the leaves from a full-sized tree will cover a surface of 5 acres, is inadequate. I do not know the number of trees nor the number of leaves which go to the ton. But I do know that 2 tons of leaves with 2 tons of grass are required to produce seedlings for an acre of rice, and I further know that it is a very small proportion of leaves which fall in a tract of evergreen forests like those of Thána. I found the greatest difficulty in getting the small amount required for my experimental plots, both this year and last. Leaves cannot be carried great distances and I think it must be admitted that the Thána rayat, who uses the materials at his disposal, in the best and most economical manner, as admitted, and who uses leaves as a subsidiary layer in ráb, cannot except in few localities depend in any appreciable degree on leaves as substitutes for loppings.

Grass remains. Mr. Shuttleworth says the supply is superabundant. But if 1½ to 2 tons per acre of rice and nágli are added to the already large demand for grass as a ráb material, it appears to me that the supply would be soon accounted for. There is not only the demand for grass for grazing and feeding stock, for thatching and other similar purposes, but also a large demand from Bombay.

I assert then that loppings are necessary for ráb. They are considered essential as one of the main layers of ráb. Cowdung it has been shown may give the principal layer for ⅕th the area. Brushwood and shrubs may supply as much, but it is for the Forest Commission to decide whether loppings can be denied especially from those areas which till the Forest Gazette of 1878 had been freely utilized by the people without let or hindrance to provide ráb material. The question is one of great difficulty. I have here only sought to give as full facts as possible to facilitate its solution as far as solution is practicable.

45. One word is required on the subject of salt-marsh rice. It is of an inferior variety. It grows excellently without ráb. Its area is estimated at 10 per cent. of the total area of rice. Where the proportion of salt is small, the land is picked in the hot season with the *kudavna*—a long-handled pick—by hand and left in the rough. The seed is sown with the first fall of rain broadcast and left to grow where it falls. The seed is treated before sowing to cause artificial germination. Where the land is very salt it is not touched till it is inundated. It is then stirred with the bullock-hoe and sprouted seed is sown on the surface of the water. It falls to the bottom and takes root. It stands complete immersion for as long as 10 days.

E. C. OZANNE,
Director of Agriculture.

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*A full grown buffalo produces dung equivalent to 270 lbs. dry in a month, *i.e.* 1,080 lbs. in 4 months or about ¼ of 2 tons which are required for the seed-bed for an acre of rice. Four months only are taken because the droppings of April and May are required for fuel in the rains and the burning of the seed-bed cannot be deferred much after 1st April. The droppings of the five monsoon months, as shown, if well kept, may be used to supplement the main layer but the keeping is extremely difficult and has yet to be taught. The droppings of June and July while the cattle are feeding on immature green grass are too liquid to be collected. I do not think the manure of these months can reasonably be counted on to supplement the ráb supply materially. In December the cattle graze on the rice fields and this is the only manure the outside field receives and it cannot be grudged. I calculate that the full manure of the remaining 4 months is available. As a fact much is lost in grazing grounds and stall feeding in a district where there are practically no good fodder crops is not feasible. I leave out this loss which may be taken as a set-off to the savings of other months. Another set-off arises from the fact that the calculations are based on the production of a full-sized buffalo. Cows produce less and of course calves still less.

Postscript.

46. The experimental crops at Karjat have now been reaped. The principal point for notice is whether the outturn is shown to vary in equal areas planted out with seedlings raised with different kinds of ráb: and if there is variation, whether it can be attributed to the quality of the seedlings. The observations recorded at the time of transplantation show very remarkable differences in the appearance of the seedlings. This difference no doubt mainly exhibited itself in variation in the area planted out from a given area of seed-bed, but the evidence now available bears on the yield of equal areas.

The seedlings from one set of beds were planted out in good soil, low lying and with first rate water-impounding capabilities. Those from the duplicate set of beds were planted in poor soil with a poor supply of water.

The results are shown in an appended table with regard to which I will try to call attention to the principal results. I have taken the cowdung ráb plot as the standard. The variation in yield is not uniform. With all the care taken to make the conditions of all plots equal, some of the results show that variation in supply of water and the like caused differences totally apart from those due to the quality of the seedlings. Thus the yield of the plots manured with cowdung gave 50·9 per cent. of the standard, while the unmanured and unrábed plots showed 60·3 and 73·5 per cent. However poor the results of cowdung as manure for the seedlings, this result cannot be attributed to anything but a better supply of water or better soil or both. Many other similar anomalies can be gleaned from the table of results. Yet the main result is nevertheless clear (1) that the seedlings from rábed plots gave a better yield in equal areas than from unrábed plots, and (2) that seedlings raised with cowdung, bough, shrub, and brushwood ráb did better than those raised with leaf and grass or grass alone. There is another method of comparing the results which I think exhibits them in the best possible manner. This is by combining the results obtained (1) according to the area planted out, and (2) the yield on equal areas. Thus :—

	Gross yield of paddy from seedlings raised in equal areas (½ gunthá) of seed-bed.		
	Good soil.	Poor soil.	Average.
	Lbs.	Lbs.	Lbs.
Pakka (= burnt) ráb.			
Cowdung	260	209	234
Ain ... ... } Bough ráb ...	257	153	202 } 235
Nána, bonda ... ... } Bough ráb ...	380	169	269 } 235
Uksi, dháiti ... ... } Shrub ráb ...	327	198	259 } 239
Fángala... ... ... } Shrub ráb ...	267	168	219 } 239
Leaf and grass ... ... } Leaf and grass	126	161	156 } 171
Grass alone ... ... } Leaf and grass	222	145	186 } 171
Kachcha (= unburnt) ráb.			
Cowdung as manure...	93	58	74
Cooke's manure and oil-cake	116	61	83
No ráb nor manure	152	53	98
Do., seed-bed cultivated	110	69	95
Korad ute	89	53	71
Chikhal ute	49	33	41

This table still further goes to show that cowdung, bough and brushwood ráb are practically equal in value of yield, that leaves and grass give fair results and that non-ráb systems are very inferior.

E. C. OZANNE,
Director of Agriculture.

Poona, 15th November 1886.

APPENDIX A.

Note.

Visited ráb plots with the Commissioner, N. D., Mr. Stewart, and the President, Forest Commission, Mr. Vidal.

The seedlings in field No. 3 had mostly been transplanted but the duplicate plots in No. 20 were all standing just ready for transplantation. Messrs. Stewart and Vidal placed the plots in order of merit, judging by the colour and size of the seedlings, without previous knowledge of the character of the ráb in each plot, thus :—

Order of merit—

1st.—No. 9, Cowdung ráb with layer of grass and earth.

2nd.—No. 4, Fángal ráb with do.

3rd.—No. 2, Nána bonda ráb with do.

4th.—No. 3, Uksi, dháiti ráb with do.

There was little in their opinion to choose between these four plots, in which the seedings were thick, luxuriant and of a healthy green.

5th.—No. 1, Ain ráb with layer of grass and earth. Mr. Stewart thought that the slight inferiority of this plot was possibly due to the position.

6th.—No. 6, Leaf and grass ráb.

7th.—No. 5, Grass ráb, 3 layers of grass separated by layers of earth and covered with a top layer of earth.

8th.—No. 8, Cowdung ráb without upper layer of grass or earth but with 1½ times the amount of dung put on No. 9.

These three plots were inferior to those already noticed but still were good. The rest were very inferior.

9th.—No. 12, Seed-bed unrábed and unmanured but carefully cultivated and levelled before sowing.

In one-half of this bed the seedlings were large and green, but those in the other half were inferior in growth and colour. Seedlings very patchy.

10th.—No. 7, Seed-bed manured with karanz oil-cake. Seedlings yellow and poor in size. Part of the seedlings damaged by crabs.

11th.—No. 11, Seed-bed unmanured, unrábed and uncultivated.

12th.—No. 10, Seed-bed manured with cowdung, quantity as in No. 9 plot but not burnt.

This plot was worst of all. The manure appears to have had no effect. The seedlings are thin and yellow and very short. Those of No. 11 are slightly better.

2. The chikal and korad-ute plots were also examined. The seedlings in the former have only begun to come above the water which overlies the plots.

The korad ute plots are divided into two portions. One plot is manured with sheep dung and the other half with Professor S. Cooke's patent manure, and half with karanz oil-cake. If anything the latter half is better than the former. There is little difference between this plot and the sheep-dunged one. But the korad ute plots show up very poorly as compared with the plots in rábed seed-beds.

3. The weeds taken from each plot in the fields Nos. 3 and 20 of seed-beds were examined. The most noteworthy fact was the large amount of weeds collected from plot No. 7 in field No. 20 (karanz oil-cake) and the still larger amount from the corresponding plot in field No. 3 manured with Cooke's artificial manure. The seedlings in the plot had been transplanted before the visit made on the 4th July.

(Signed) E. C. OZANNE.

No. 1449 of 1886.

6th July 1886.

This note is forwarded with compliments to Mr. T. H. Stewart and Mr. G. W. Vidal in turn, with a request that they will favour the undersigned with an expression of their opinion as to the correctness of the above statements regarding the appearance of the various plots and with any other impressions which the inspection may have caused on the comparative values of the varieties of ráb and ráb substitutes under experiment.

(Signed) E. C. OZANNE,
Director of Agriculture.

Poona, 10th July 1886.

Forwarded as requested to the Commissioner, N. D.

I fully concur with Mr. Ozanne's remarks as to the appearance of the seedlings in the different beds. I am glad to have had the opportunity of seeing a complete set of these ráb plots, in their most interesting, and, as I think, their most instructive stage, when the seedlings are ready for transplantation. The harvest derived from each batch of transplanted seedlings may not of course fully fulfil the promise of the seedlings before transplantation, but the condition of the crops as we saw them is, I believe, a very good test of the comparative value of the different systems tried. The first inference which can be fairly drawn from these experiments is that the preference shown by most of the Thána cultivators for the ain tree for ráb purposes over all other kinds of trees and shrubs is a fanciful one, not based on any real superiority. There is practically very little to choose between the seedlings raised with loppings of (1) ain, (2) nána and bonda mixed, (3) ukshi and daiti mixed, and (4) fángal or pángla (Pogostemon purpuricaulis), though it was easy to decide as regards these particular plots that the 'fangal' seedlings were rather better than the rest and that the 'ain' seedlings were rather worse than the others. Different materials for táhál ráb are used in different localities according to local preference, convenience and available supply. Where 'ain' is the favourite material, shrubs like 'ukshi' 'dháiti' and 'fángal' are despised. One reason probably is that ain loppings are easier to collect and that the leaves are more firmly attached to the twigs than those of most other táhál yielding trees and shrubs, and another reason for the preference for 'ain' over 'ukshi,' 'dháiti,' &c., may be that the lopping supplies firewood as well as 'táhál' to the cultivator. However this may be it is very satisfactory to know. that fast growing shrubs like 'fángal' 'ukshi' and 'dháiti' which have no value as timber, yield quite as good results to the rice cultivator as the more expensive materials got at the sacrifice of much valuable timber from 'ain' 'nána,' 'bonda' and other similar trees. The comparative results obtained in plots 8, 9 and 10 are also very instructive and confirm strikingly the opinion Mr. Ozanne has previously stated, that the *manurial* element in ráb cultivation is of very minor importance as compared with the *burning* of the soil.

We have here two adjacent plots. In one of these (No. 9) 400 lbs. of cowdung have been burnt with grass in layers in the ordinary way; in the other (No. 10) the same quantity of cowdung has been used as manure without burning. As was to be expected the seedlings in No. 9 are excellent in every way. In No. 10, the unburnt plot, the seedlings are worse even than those in plot 11 which has not been burnt, manured or cultivated. This result will perhaps surprise many of those who are now studying the ráb question.

Again in plot 8 the results show how important it is that the soil should—in ráb cultivation—be thoroughly burnt, and that the materials used should be such as to ensure proper combustion. In this plot 600 lbs. of cowdung were spread on the ground and burnt. But no grass being used combustion must evidently have been less complete than in plot 9. As a result the seedlings in plot 8 are markedly inferior to those in plot 9, although one and a half times as much cowdung was consumed in preparing the seed-bed.

The results obtained in plots 5 and 6 are also interesting. In No. 5 grass alone has been used, but to prevent too rapid combustion the grass has been spread in 3 layers with earth between each. In No. 6 grass and leaves combined have been burnt. The seedlings in both these plots are very fair, though not quite as good as those reared in the beds where loppings have been burnt. Their condition shows at any rate that grass alone, or grass and leaves together form a very good substitute for loppings. The only drawback seems to be that, where grass and leaves are used without cowdung or loppings, the quantity of material necessary is comparatively very large and it is doubtful whether the supply of grass and leaves within reasonable distances of rice fields would be sufficient in most localities to admit of their superseding loppings of trees and shrubs as ráb material to any appreciable extent.

I may note in conclusion that the plots selected by Mr. Ozanne for the different seed-beds appeared, when I saw them at the end of May before sowing operations had commenced, to be very equal as regards soil, drainage and other conditions. Absolute uniformity, where so many plots have to be marked off, is perhaps impossible, but I feel sure that no one seed-bed has obtained any material advantage over any other in these respects.

(Signed) G. W. VIDAL.

My impressions are much the same as those recorded by Mr. Vidal. I consider the experiments to have been very fairly conducted and I would not wish too much stress to be laid upon my remark regarding the position of the seed-bed with 'ain' loppings.

There was certainly an inferiority in the seedlings grown on the 'ain' plot compared with those grown on the plot 'rábed' with cowdung, and the experiment so far as it goes, shows that there is no good reason for the preference shown by the rice cultivators for 'ain' as 'táhál' for ráb. What appear to be prejudices, however, in the minds of local cultivators in this country have so often turned out to be really sound ideas that I should like to see a similar experiment made next season. Of course the experiment up

to the present is only partial : the result of the harvesting may yet show that the seedlings raised with 'ain' ráb have more vitality and productiveness than those from the quick-growing and comparatively useless jungle shrubs.

The most remarkable and most instructive contrast is shown in the cases of the plots manured with cowdung in the ordinary way and that on which cowdung had been burnt with the usual ráb process. The seedlings in the one case were poor and yellow in colour, in the other case they were finely grown and of a deep green colour. It is clear that the roasting of the soil is a very valuable process and that without it in this locality and on these soils, rice cultivation could not be carried on profitably. The use of the richest manurial substances in the ordinary way is shown by these experiments to be of no more, but even less value in stimulating production than the use of the commonest jungle shrubs in the ráb fashion. I venture to predict that the final result of these experiments will be to prove that the Thána rayat in using ráb as he does is adopting the only ready means by which he can cultivate his rice with profit. The experiments will be particularly useful in every sense if they can be used to induce the rayat to content himself with 'fángal', 'ukshi' 'dháiti' and other similar growth and leave the 'ain' and the 'nána' and other really forest trees for firewood and other uses.

(Signed) T. H. STEWART.

No. 3185 of 1886.

From

The ACTING COLLECTOR.
Thána ;

To

The DIRECTOR of AGRICULTURE,
Bombay.

Thána Collector's Office, 9th July 1886.

Sir,

In reply to your No. 1437 of the 6th instant, I have the honour to state that as I knew the extreme care with which your own notes of the various ráb-plots at Karjat are taken I did not write any detailed statement of the conditions I saw.

2. I may, however, say generally that my conclusions were :—

(1) That the plot with cowdung ráb had apparently the best yield of plants.

(2) That the táhál ráb plots came next but at no great interval.

(3) That (contrary to what I had expected from the general fondness of the people for ain loppings) there was apparently little or nothing to choose between the plot No. 1 with ain ráb and Nos. 2 and 3 with the loppings of nána, bonda, uksi and dháiti.

(4) That the difference between the foregoing and these plots, where no burnt ráb had been used, was exceedingly marked both as regards the size of the plants and their number, and

(5) That the yield on the seed-bed unrábed and unmanured was miserable when compared to the luxuriant growth on the beds which had burnt cowdung and burnt loppings.

3. I also saw the beds mentioned in your second para. manured with artificial manure and sheep droppings. These did not appear to be by any means a success.

4. It remains to be seen whether the final state of the transplanted seedlings when the crops are ripe for cutting will show the same marked superiority of burnt ráb over other methods of cultivation.

I regret that I did not particularly notice the state of the plots treated with grass and leaves as compared with those which had loppings. This is perhaps the most important point in so far as concerns the destruction of forest growth for ráb purposes. Doubtless you have made a careful note of this point. My attention was so occupied with the great difference between the burnt and unburnt plots that I forgot to note the differences of the burnt plots *inter se*.

I have, &c.,

(Signed) F. L. CHARLES,
Acting Collector.

APPENDIX B.

Results of Experiments at Karjat in 1886 compared inter se and with results obtained at Karjat in 1885.

Variety of Ráb.	Proportion of seed-bed in an acre of rice.						Outturn per acre of rice in husk calculated on the yield of measured plots.						Comparative outturn per acre. Cowdung = 100	
	Area planted from seed-bed taken as half gunthá.			Area of seed-bed for an acre of rice.	Comparative proportion of seed-bed, that of cowdung being taken as 1·00 gunthá.		Good soil.		Poor soil.		Average.			
	Duplicate plots.		Average.				Grain.	Straw.	Grain.	Straw.	Grain.	Straw.		
	Gunthás.	Gunthás.	Gunthás.	Gunthás.	1886 Standard =6·15 gunthás.	1885 Standard = 5·30 gunthás.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	1886 Standard = 2886 Lbs.	1885 Standard = 3796 Lbs.
Burnt (= pakka) ráb.														
1. Cowdung	3·36	3·15	3·25	6·15	1·00	1·00	3,107	7,200	2,665	3,600	2,886	5,400	100·0	100·0
2 Ain	3·47	3·06	3·26	6·13	·99	1·43	2,960	7,200	1,990	4,200	2,475	5,700	85·7	94·9
3. Nána, bonda	3·68	3·31	3·49	5·73	·93	...	4,135	8,800	2,040	3,840	3,087	6,320	106·9	...
4. Uksi, dháiti	4·27	3·36	3·82	5·23	·85	...	3,057	7,520	2,362	4,600	2,709	6,060	93·8	...
5. Fángala	3·24	3·37	3·30	6·06	·98	1·40	3,300	6,840	2,005	4,920	2,652	5,880	91·9	76·7
6. Cowdung without grass... ...	3·20	2·40	2·80	7·14	1·16	...	2,364	5,040	1,698	3,640	2,031	4,340	70·3	...
7. Leaf with grass	2·36	3·29	2·82	7·09	1·15	1·48	2,231	5,080	1,952	4,040	2,091	4,560	72·4	42·2
8. Grass	3·09	3·38	3·23	6·19	1·01	...	2,887	6,880	1,710	3,800	2,298	5,440	79·6	...
Unburnt (= kachcha) ráb.														
9. Cowdung as manure	2·29	1·77	2·03	9·85	1·60	...	1,623	6,800	1,315	3,160	1,469	4,980	50·9	...
10. Cooke's artificial manure ..	1·82	...	1 82	10·99	1·79	...	2,555	5,800	...	...	2,026	4,660	70·2	...
11. Karanz Oil-cake	1·64	...	1·64	12·19	1·98	...	...	...	1,498	3,520				
12. No ráb nor manure	2·09	1·61	1·85	10·81	1·76	4·03	2,917	7,400	1,329	3,680	2,123	5,540	73·5	28·3
13. Do., but seed-bed cultivated ...	1·82	2·53	2·17	9·22	1·49	...	2,420	7,280	1,065	3,280	1,743	5,280	60·3	...
14. Korad ute (sheep folded) ...	1·49	...	1·49	13·42	2·18	...	2,290	4,630	1,589	3,500	1,939	4,060	67·1	...
15. Do., (Cooke's artificial manure)	1·14	...	1·14	17·54	2·85	...	..	...	1,663	4,550	1,974	4,690	67·3	...
16. Do., (karanz Oil-cake) ...	1·64	...	1·64	12·19	1·98	...	2,286	4,830	...	...				
17. Chikhal ute (sheep folded) ...	0·90	...	0·90	22 22	3·61	...	2,600	6,220	1,267	4,450	1,934	5,330	66·6	...
18. Do., (Cooke's artificial manure)	1·10	...	1·10	18·18	2·95	...	...	...	1,400	4,370	1,422	3,870	48·2	...
19. Do., (karanz oil-cake) ...	1·14	...	1·14	17·54	1·49	...	1,443	3,370	...	...				

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GLOSSARY OF TERMS USED IN THE REPORT.

A.—Crops.

1. **Khura'sni**—Verbesina sativa,—an oil-seed, generally grown as the last crop before the fallow in the *varkas* rotation.

2. **Na'gali** or **Na'chani**—Eleusine coracana,—a cereal called elsewhere than in the Konkan *rége, bávto, marua.*

3. **Vari**—Panicum miliaceum,—a cereal.

B.—Lands.

1. **Ba'ga'yat.**—Garden land, *i.e.*, land growing crops and fruit trees irrigated artificially from wells, channels, &c.

2. **Bhetta** or **Betta.**—The dry-crop land producing leaves and twigs required for the cultivation of spice gardens in Kánara. A necessary adjunct to such gardens, as *shindádi* lands are to rice and cropped *varkas.*

3. **Ga'ira'n** (Deccan) and **Gurcharan** (Konkan).—Land set apart for the free grazing of the village cattle.

4. **Ga'obha'g.**—The portion of the forest area within the limits of any village set apart before the passing of the Forest Act to supply the local wants of the villagers, as distinguished from the Imperial reserves.

5. **Kha'jan.**—Salt-marsh land; mangrove swamps; land on the sea-shore or near tidal creeks, too largely impregnated with salt to permit of cultivation.

6. **Khap.**—That portion of *varkas* which is kept to produce grass for *ráb.*

7. **Kharif.**—Land growing rice. Is in the Konkan practically equivalent to rice land. It is not used to denote the early harvest, as in the Deccan, or a crop belonging to the early harvest.

8. **Kuran.**—Grass meadow, yielding grass for fodder, unassessed and unoccupied but sold by yearly auction for grass and grazing, or reserved for fodder by Government.

9. **Ma'lki** Number.—Means literally any survey number in which the occupant has proprietary rights. In practice it is now used in the Konkan to denote any survey number, whether rice, *varkas* or garden land, held under the survey tenure.

10. **Parigh.**—*Parigh* is used to denote the area of unassessed waste *varkas* land, wherever situated within the village boundaries, which remains after all the land included in private holdings and all the land set apart for special purposes, such as forest, grazing, village site, &c., has been separately measured.

11. **Pot Khara'b.**—The uncultivable and unassessed portions of rice, *varkas, rabi* or *bágdyat* fields (survey numbers).

12. **Pot Varkas.**—The *varkas* portions, assessed, of rice survey numbers.

13. **Rabi.**—Not used, as in the Deccan, to denote the late, *i.e.*, cold weather harvest, or a crop belonging to that harvest, but to distinguish from rice land (*kharíf*) and *varkas* land, a variety of alluvially formed dry-crop land generally too moist to grow any but a cold weather crop.

14. Salt rice.—Land largely impregnated with salt and reclaimed from the sea, or washed over by sea water. Growing coarse rice without *ráb.*

15. **Shinda'di.**—This is that portion of *varkas* which is uncultivated and kept for the production of *ráb* material. It is an adjunct of rice land or *varkas* land periodically cultivated, as *bhetta* land is the adjunct of spice gardens in Kánara.

16. Sweet rice.—Rice land not impregnated with salt.

17. **Varkas.**—Literally upland. This term is generally used to denote all lands not *kharíf, rabi,* garden or salt-marsh land. It includes *parigh* but not *khájan.*

C.—Revenue Terms.

1. **Dafter.**—Records.
2. **Kulkarni.**—The hereditary village accountant.
3. **Maha'l** or **Taraf.**—Obsolete sub-division of a *táluka.*
4. **Maha'lkari.**—The Revenue and Magisterial Officer in charge of a *peta.*
5. **Ma'mlatda'r.**—The Revenue and Magisterial Officer in charge of a *táluka.*
6. **Panch.**—Body of arbitrators, usually five in number.
7. **Pa'til.**—The Revenue or Police headman of a village.
8. **Peta.**—A sub-division of a large *táluka* presided over by a *Mahálkari.*
9. **Shera.**—An endorsement.
10. **Tala'ti.**—The stipendiary village accountant.
11. **Ta'luka.**—A sub-division of a district in the charge of a *Mámlatdár.*
12. **Vahiva't.**—User, usufruct, so *ráb vahivát, shindád vahivát,* &c.
13. **Ya'di.**—Memorandum.
14. **Zilla.**—A district in charge of a Collector of Land Revenue.

D.—Tenures.

1. **Ardheli.**—Literally 'half' payer. A sub-tenure where the cultivator agrees to cultivate the land of an occupant, providing labour, *ráb* and manure, and receiving half the gross produce, the superior holder paying the Government assessment or quit-rent.

2. **Dha'ra.**—A superior hereditary and permanent tenure in villages which have, at one time or other, been farmed to *khots,* the holder holding direct from Government and paying nothing more than the Government assessment. Similar to the *mirás* tenure of the Deccan.

3. **Gatkul.**—An old term, now obsolete, used to denote a tenure without permanent rights of occupancy, as distinguished from *mirás* and other hereditary tenures.

4. **Ina'm.**—Rent-free land or land held at a privileged rate.

5. **Iza'fat.**—The tenure of villages, a percentage or portion of whose revenue has been specially assigned for remuneration of the services of hereditary Government officers.

6. **Judi.**—The quit-rent paid on *inám* lands.

7. **Kha'sbandi.**—A tenure in which the *shindádi* portion of the *varkas,* which is the adjunct of a rice field, is treated as inseparable from the rice to which it is the appendage.

8. **Khoti.**—The tenure of the *khots,* originally farmers of the Government revenue. The *khoti* tenure prevails only in the Ratnágiri district and the southern portion of the Kolába district.

9. **Na'garbandi.**—A tenure in which the Government revenue is collected in the form of a tax on the number of ploughs actually yoked and taken out for cultivation. This plough assessment either covers that for all kinds of cultivation, or only *varkas* cultivation, where the rice lands are individually assessed at an acre rate.

10. **Pa'ndharpesha.**—The tenure of the Pándharpeshás ('white clothed people?) who were before the survey allowed to hold land at specially low rates. The Pándharpeshás of the Konkan including, Bráhmans, Parbhus, Shenvis, &c. and artisans are land-holders who cultivate through tenants-at-will.

11. **Rayatva'ri.**—The tenure of *khálsa* or Government land, in which the *rayat* or occupant holds direct from Government.

12. **Suti.**—A term formerly used in the Konkan denoting a tenure of land carrying with it hereditary and permanent rights of occupancy. As a rule rice and garden lands only were held on the *suti* tenure. The term is now used to denote the holding under the survey tenure.

E.—General.

1. **Dalhi.**—A mode of preparing *varkas* land for cultivation by burning *in situ* the vegetation on such land, ploughing or hand-digging and sowing in the area burnt. In the Kolába district *dalhi* is equivalent to *ráb* cultivation in *varkas* in Thána.

2. **Inja'ili.**—Jungle wood. The term is generally applied to all forest trees, except fruit trees and the trees (teak, blackwood and sandalwood) which are reserved as Government royalties.

3. **Jhita.**—Side branches of the bamboo used for fencing.

4. **Kolpa't.**—Dead or fallen wood used for firewood (*jaláu*) or building timber (*imárati*).

5. **Kumri.**—A synonym for *dalhi*. It is an above-ghát or Deccan word.

6. **Pha'lni-tukda.**—The sub-divisions or subordinate (*pot*) numbers into which *varkas* survey numbers are divided, so that each occupant's holding may be assessed and shown separately in the records.

7. **Pot** Number.—Ditto of *kharif* survey number.

8. **Ra'b.**—Denotes (1) the materials burnt on the seed nursery for rice, or for *nágli* or *vari*, and (2) the mode of such cultivation.

9. **Shinda'd.**—An occasional synonym for *táhál*.

10. **Sud.**—The register of lands prepared by the Survey Department for the administration of the settlement. The village Register.

11 **Ta'ha'l.**—Loppings of trees and shrubs used for *ráb* cultivation.